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ACTIVITIES REPORT  
REGISTRY OF TUMORS IN LOWER ANIMALS

1965 - 1973

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MAILING ADDRESS:

REGISTRY OF TUMORS IN LOWER ANIMALS  
NATIONAL MUSEUM OF NATURAL HISTORY  
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## ESTABLISHMENT, OBJECTIVES, AND OPERATION

The Registry of Tumors in Lower Animals was begun in 1965 as a cooperative project between the National Cancer Institute (Contract No. N01-CB-33874) and the Smithsonian Institution to study tumors in invertebrate and poikilothermic vertebrate animals. Objectives are: (1) to collect, identify, characterize, and preserve specimens with neoplasms and related disorders from natural habitats, zoos, aquaria, and laboratory experiments; (2) to conduct and promote experimental studies of the nature, incidence, and etiology of these diseases; and, (3) to analyze, correlate, and disseminate pertinent published and unpublished information. As a result of such efforts, a number of benefits may accrue:

1. An improved understanding of the biology of cancer as it occurs at various levels of phylogeny.
2. Evidence concerning the question of whether certain animals may be exempt from cancer, and if so, why.
3. Evidence that may lead to discovery of new etiologic agents in cancer.
4. Evidence of carcinogens in the environment.
5. Evidence that may bear on certain theories of cancer: e.g., the oncogene theory, the clonal selection theory, the somatic mutation theory, and others.
6. Discovery of types of animals that may be useful in cancer research because of specific features such as differences in immunological complexity, unusual sensitivity or resistance to carcinogens, ability to concentrate certain elements, such as Hg, Cu, or Zn, genetic features influencing cancer rates, ability to reject tumors by autectomy, and so on.
7. Discovery of possible reservoirs or vectors of oncogenic viruses.
8. Identification and protection of populations in possible jeopardy from epizootic neoplasia.
9. Maintenance of a proper perspective among citizens concerned about the significance of reports of cancer among lower animals of economic importance.

After specimens with cryptogenic and induced lesions are received they are photographed, studied grossly and microscopically and stored for easy retrieval. An effort is made to determine the nature of the lesion or verify the diagnosis of the contributor, often after getting the opinion of one or more specialists for the type of animal or tissue involved. When specimens are received which appear to be good research models for furthering the understanding of neoplastic processes, research projects may be initiated by the Registry with the consent of the contributor.

## PHYSICAL PLANT

Laboratory, storage, and office space occupies three rooms in the National Museum of Natural History, Smithsonian Institution, Tenth and Constitution Avenue, Northwest, Washington, D.C. In addition, the Registry has use of electron microscope, darkroom, and aquarium facilities. Library and duplication services are also available.

## INFORMATION CONCERNING THIS REPORT

This report is cumulative for all accessions in the Registry's collection as of 5 December 1973. It supersedes earlier reports in that most cases previously listed as pending now have diagnoses and some cases have been reinterpreted following additional study. As a new feature, pertinent references are given for those accessions that have been specifically described in the literature or that exemplify a type of disease that has been the subject of a series of papers.

Additional information concerning selected unpublished cases can be made available on request. Persons interested in the comparative study of slides in the collection may either visit the Registry or request duplicate slides on short-term loan. Slides do not circulate from accessions that do not contain duplicate material; those that contain rare and irreplaceable material; and accessions that are being worked up for publication by the contributor. Anyone desiring to publish photographs from such comparative studies is expected to obtain permission from the contributor. Twenty sets of 20 slides each are available as instructional aides.

This report is being distributed to all contributors whose address is still known and to other persons who have expressed an interest in the work of the Registry and/or tumors in lower animals. It is also being sent to selected persons known to be studying diseases in various cold-blooded vertebrates and invertebrates for their possible interest in this peripheral field. Approximately 2,000 copies will be distributed.

## DISTRIBUTION OF SPECIMENS IN THE COLLECTION

Specimens are accessioned individually except when groups of the same species having similar pertinent parameters (collecting site; type of disease; same experimental study, etc.) are received at the same time. We have been particularly fortunate that several collections of research material have been contributed en masse: e.g., RTLA 577 by Dr. William R. Duryee; RTLA 809 by Dr. Gladys S. King; and RTLA 443 by Miss Leora Stark, Mr. Douglas A. Stark, and Dr. James C. Dahl for Dr. Mary B. Stark.

As of 5 December 1973 there were 887 accessions in the collection distributed as follows:

## DISTRIBUTION OF SPECIMENS IN THE COLLECTION (CONTD)

	<u>Neoplastic</u>	<u>Non-neoplastic</u>	<u>Indeterminant</u>	<u>Total</u>
Reptiles	38	53	0	91
Amphibians	41	36	0	77
Bony fish	252	156	22	430
Sharks	3	7	0	10
Lampreys	1	3	0	4
Tunicates	0	6	0	6
Mollusks	68	61	1	130
Echinoderms	0	5	1	6
Arthropods	6	73	3	82
Annelids	0	22	0	22
Acanthocephala	0	1	0	1
Platyhelminths	0	10	0	10
Coelenterates	0	7	7	14
Porifera	0	1	1	2
Protozoa	0	1	0	1
Fungi	0	1	0	1
	<u>409</u>	<u>443</u>	<u>35</u>	<u>887</u>

The non-neoplastic lesions include infectious and parasitic granulomas, developmental anomalies, and injury and wound repair. Indeterminant lesions either have not been fully examined or the material is inadequate for diagnosis.

Among the accessions with neoplasms, additional diseased specimens can be field collected in the following cases:

Tiger salamander	Fibroma/papilloma	Southcentral USA
Cunner	Papilloma	Northeast USA
White croaker	Papilloma	California, USA
Atlantic eel	Papilloma	Europe
Various flatfish	Papilloma	Western USA
Rock oyster	Papilloma	Australia
American oyster	Hematopoietic neoplasm	Eastern USA
Leopard frog	Renal adenocarcinoma	Northeast/Northcentral USA
Green turtle	Fibroma	Hawaii/Caribbean
Northern pike	Lymphosarcoma	Europe/North America
Various catfish	Papilloma/carcinoma	USA
Yellowfin goby	Papilloma	Japan/Korea
Goldfish	Fibroma	USA
Muskellunge	Lymphoma	North America

## SUBMITTING SPECIMENS

We invite you to help in building this collection by submitting examples of induced or naturally occurring neoplasms, pre-neoplastic conditions, or indeterminate lesions of a presumptive neoplastic nature that require confirmation. As there is an indistinct boundary between

neoplastic disease and the process of inflammation, repair, and regeneration, examples of the latter processes are also useful to establish points of reference. If we prepare the material histologically, a set of slides will be returned to the contributor with our diagnosis.

Specimens are accepted alive, fixed, in blocks, and on slides. Frozen specimens are generally unsatisfactory for preparation of good histological material, but sometimes are useful when an infectious agent must be sought.

Many specimens arrive poorly fixed for the following reasons:

1. Delay in fixation - Specimens should be fixed immediately after death or when death is imminent since degeneration in some cells begins premortem. If a delay is unavoidable, specimens should be kept cool in the interim, BUT NOT FROZEN.
2. Slow or incomplete penetration - To remedy this we recommend:
  - a. Always open body cavity or inject fixative;
  - b. Either inject the fixative or preferably, make deep transverse incisions intermittently along the length of large tumors and organs. This is especially important for fixatives that penetrate slowly (e.g., 10 percent formalin);
  - c. Use fixatives that penetrate rapidly (Bouin's works well for fish, Davidson's for marine mollusks, and Dietrich's [FAA] for insects);
  - d. Remove air from the trachae of insects by subjecting them to negative pressure (vacuum chamber) while immersed in the fixative for as long as bubbles continue to appear; and,
  - e. For electron microscopy submit bits of tissue, less than 2 mm in diameter, in glutaraldehyde.
3. Insufficient volume of fixative - A volume of chemical ten times the volume of the specimen is recommended.

#### REPRINT LIBRARY

A continuing project to assemble a complete library of reprints relating to neoplasms in invertebrates and poikilothermic vertebrate animals presently contains more than 2,500 reprints (see computer abstract form on next page) is nearing completion. Following final editing, searches will be made at a reasonable cost. WE WILL NOT HONOR REQUESTS FOR XEROX COPIES OF REPRINTS.

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001: Author:
002: Date:
003: Title:
004: Journal information:

005: Serial number:

006: Review      Antitumor agent      Research      Associated material      Vector
007: Corresponding RTLA number:
008: Language (if not English):

009: Phylum:
010: Class:
011: Order:
012: Family:

013: Genus:
014: Species:
015: Strain:

016: Continent:
017: Country:
018: State/Province:

019: City/County
020: Habitat:
    F    M    E    T

021: Neoplastic      Borderline      Tumor      Hyperplastic      Hypertrophy
    Mutagenic      Developmental anomaly      Infectious      Inflammation
    Injury and repair      Toxic      Normal

022: Epithelial      Nonepithelial

023: System of origin: Integumentary      Skeletal      Nervous      Circulatory
    Endocrine      Digestive      Excretory      Reproductive      Respiratory
    Mesenchymal      Sensory      Muscular      Hematopoietic

024: Organ of origin:

025: Cell of origin:

026: Diagnosis:
027: Transmission:      Cell free extract      Tissue homogenate
    Graft      Other:

028: Induced?
029: Invasive?
030: Metastasis?
031: Physiology:

032: Virus, RNA, DNA
033: Chemical:
034: Transplant/Graft:
035: Physical:      Radiation
    Trauma      Temperature
    Other:

036: Bacteria:
037: Protozoa:
038: Fungus:
039: Parasite:
040: Genetics:

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## RESEARCH

While several research projects in cooperation with contributors are in early phases, the principal study has been on the nature, incidence, and etiology of epidermal carcinomas and papillomas in several populations of fish, under the auspices of the Committee on Comparative Oncology of the Union Internationale Contre le Cancer (UICC). This Committee is composed of eight scientists each of which, with a small work group, is making an in-depth study of one or two particular populations of lower animals with a significant incidence of a neoplastic disease. The purposes and objectives of this Committee have been described in detail by its Chairman (Dawe, C. J. Comparative Oncology and Environmental Carcinogens. UICC Bull. Cancer, 8(4): 2-3; Dec. 1970).

## PAPERS WITH AVAILABLE COPIES

- Harshbarger, J. C. & R. L. Taylor. Neoplasms of Insects. Annu. Rev. Entomol., 13: 159-190. (1968).
- Cantwell, G. E., J. C. Harshbarger, R. L. Taylor, C. Kenton, M. S. Slatick, & C. J. Dawe. A Bibliography of the Literature on Neoplasms of Invertebrate Animals. GANN Monogr. 5, pp. 57-84. (1968).
- Harshbarger, J. C. The Registry of Tumors in Lower Animals. Natl. Cancer Inst. Monogr. 31, pp. XI-XVI. (1969).
- Harshbarger, J. C. & G. W. Bane. Case Report of a Fibrolipoma on a Rockfish, Sebastes diploproa. Natl. Cancer Inst. Monogr. 31, pp. 219-221. (1969).
- Dawe, C. J. & J. C. Harshbarger (ed.). Natl. Cancer Inst. Monogr. 31: Neoplasms and Related Disorders of Invertebrate and Lower Vertebrate Animals. 772 pp. (1969).
- Harshbarger, J. C., G. E. Cantwell, & M. F. Stanton. Effects of N-nitrosodimethylamine on the Crayfish, Procambarus clarkii. In: Proceedings: IVth International Colloquium on Insect Pathology [held in conjunction] with The Society for Invertebrate Pathology, 25-28 August 1970, College Park, Md., pp. 425-430. (1970).
- Cosgrove, G. E. & J. C. Harshbarger. Testicular Tumor in a Salamander. J. Amer. Vet. Med. Assoc., 159: 582. (1971).
- Zwart, P. & J. C. Harshbarger. Hematopoietic Neoplasms in Lizards: Report of a Typical Case in Hydrosaurus amboinensis and of a Probable Case in Varanus salvator. Intl. J. Cancer, 9: 548-553. (1972).
- Harshbarger, J. C. Work of the Registry of Tumours in Lower Animals with Emphasis on Fish Neoplasms. Symp. Zool. Soc. London, No. 30: 285-303. (1972).
- Harshbarger, J. C. Invertebrate Animals--What Can They Contribute to Cancer Research? Fed. Proc., 32: 2224-2227. (1973).

Harshbarger, J. C. & C. J. Dawe. Hematopoietic Neoplasms in Invertebrate and Poikilothermic Vertebrate Animals. In: Unifying Concepts of Leukemia, Bibl. haemat., No. 39, R. M. Dutcher & Chieco-Bianchi (ed.), pp. 1-25, Karger: Basel. (1973).

Harshbarger, J. C. & R. M. Faust. Environmental Factors Internal to the Host That Affect the Success of Microbial Insecticides. Ann. N. Y. Acad. Sci., 217: 131-140. (1973).

#### PAPERS IN PRESS

Harshbarger, J. C. Radiation, Neoplasms, Carcinogenic Chemicals, and Insects. In: Insect Diseases, Vol. 2, G. E. Cantwell (ed.), Marcel Dekker: New York. (expected May 1974).

Dawe, C. J. & J. C. Harshbarger. Neoplasms in Feral Fishes: Their Significance to Cancer Research. Symposium on Fish Pathology, 7-9 August 1972, Armed Forces Institute of Pathology, Washington, D.C. (expected Spring 1974).

#### HIGHLIGHTS

Some significant discoveries pertaining to cold-blooded animal tumors during the last decade are listed below. Numerous examples of these and similar cases have been contributed to the Registry for which we are greatly appreciative.

1. The initial discovery of the carcinogenicity of aflatoxins resulted from the study of hepatomas in hatchery rainbow trout. For brief history and tumor characteristics see Ashley, Laurence M. Liver Cell Carcinoma in Rainbow Trout. Amer. J. Pathol., 72: 345-348; 1973.
2. The first fish neoplasms of central nervous system origin: (1) an olfactory neuroepithelioma in a bloater (RTLA 257); and (2) a retinoneuroblastoma in a croaker (RTLA 650). Since neuroepitheliomas can be induced in hamsters by a nitrosamine [Herrold, K. Cancer, 17: 114-121; 1964] perhaps nitrosamines are a significant environmental pollutant.
3. A lamprey with a metastatic melanoma (RTLA 89) is the most primitive vertebrate in which a malignant type neoplasm has been found.
4. A hematopoietic neoplasm in a sandbar shark (RTLA 523) is the only blood cell tumor in a Chondrichthyes.
5. New evidence that a herpes virus causes the Lucké renal adenocarcinoma in leopard frogs.

6. The first reports of hematopoietic neoplasms in reptiles [Cowan, D. F. J. Amer. Vet. Med. Assoc., 153: 848-859, 1968; Frank, W. & A. Schepky. Pathol. Vet., 6: 437-443, 1969].
7. The only C-type virus in lower animals was discovered in a viper [Zeigel, R. F. & H. F. Clark. J. Natl. Cancer Inst., 43: 1097-1102; 1969] and DNA polymerase activity is associated with this RNA virus [Hatanaka, M. et al. Proc. Natl. Acad. Sci. USA, 67: 143-147; 1970].
8. Experimental studies on the epizootic hematopoietic neoplasms in northern pike (RTLA 112) and muskellunge (RTLA 808) suggests a viral etiology.
9. Transplantable hematopoietic neoplasms in a Mexican axolotl (RTLA 506).
10. Transplantable invasive neuroblastomas and imaginal disk neoplasms in insects (RTLA 381-383).
11. Epizootic hematopoietic neoplasms in various oysters and mussels involving two cell types (RTLA 224, 225, 235, 502).
12. Papillomas and carcinomas in bullheads from selected Florida lakes (RTLA 288, 289, and numerous others in the collection).
13. Papillomas in several populations of Australian oysters (RTLA 107, 151, 160-162, 215, 223).
14. Discovery of a herpes virus in an oyster [Farley, C. A., W. G. Banfield, G. Kasnic, Jr., & W. S. Foster. Science, 178: 659-760; 1972].
15. The first discovery of adenomatous polyps of gastric mucosa in cold-blooded animals (RTLA 570, 571). These tumors were found in trout which also had hepatomas. Aflatoxin was absent from the diet so some other carcinogen must have been involved.
16. Papillomas (RTLA 550-553) and an ameloblastic odontoma (RTLA 675) in cunners.
17. The first smooth muscle neoplasm (leiomyosarcoma) in a reptile (RTLA 560).
18. Epizootic skin neoplasms in neotenic tiger salamanders in a sewage settling pond (RTLA 791, 792).



19. Induction of hepatocellular and cholangiocellular neoplasms in guppies with azo compounds [Khudolei, V. V. J. Ichthyol. (English translation of Voprosy Ikhtiologii), 12: 319-324, 1972], in guppies and zebra fish with diethylnitrosamine [Stanton, M. F. J. Natl. Cancer Inst., 34: 117-130, 1965] with dimethylnitrosamine [Khudolei, V. V. Vopr. Onkol., 19: 88-94, 1973], and with nitrosomorpholine [Khudolei, V. V. (in press)].
20. Induction of hepatomas in trout and salmon with aflatoxin B<sub>1</sub>, aflatoxin B<sub>1</sub> plus cyclopropene, urethane, dimethylnitrosamine, acetylaminofluorene, aminoazotoluene, para-dimethylaminoazobenzene and DDT and nephroblastomas in rainbow trout with dimethylnitrosamine [Reviewed by Wales, J. H. and by Ashley, L. M. In: A Symposium on Diseases of Fishes and Shellfishes, S. F. Snieszko (ed.), Am. Fisheries Soc. Special Pub. No. 5, 1970, pp. 351-365 and 366-379 respectively]. Examples of induced hepatomas and nephroblastomas in rainbow trout contributed by Dr. L. M. Ashley; RTLA 296-326.
21. Induction of papillomas and adenomas in apple snails by 20-methylcholanthrene and 3,4-benz-pyrene (RTLA 269). [See review: Krieg, K. Invertebraten in der Geschwulstforschung. Beiträge zur Krebsforschung, Vol. 12, Verlag Theodor Steinkopff: Dresden, 215 pp., 1973].

#### PERSONNEL

The Project Officer for the contract is Dr. Clyde J. Dawe, Head, Comparative Oncology Section, Laboratory of Pathology, National Cancer Institute, National Institutes of Health, Bethesda, Maryland, 20014.

The Principal Investigator for the contract is Dr. David L. Pawson, Chairman, Department of Invertebrate Zoology, National Museum of Natural History, Smithsonian Institution, Washington, D.C., 20560.

The Staff of the Registry is as follows:

Director - John C. Harshbarger

Registrar - Phyllis M. Schellenger

Histopathology Technician - Linda J. Cullen

Bibliographers - Judy E. Foster and Marilyn S. Slatick

## LIST OF ACCESSIONS

A diagnosis or very brief description of the nature of the lesion is given in most cases. This description may be ours or the contributor's. The reprint cited is either a report on that specific case or a recent article in a series of pertinent articles.

RTLA 1. Planarian, Dugesia dorotocephala

Material: Six slides; 12 photographs

Diagnosis: Papilliform tumors and malformations

Submitter: J. A. Foster

Reprints: Foster, Jean A. Induction of Neoplasms in Planarians with Carcinogens. Cancer Res., 23: 300-303. 1963.

Foster, Jean A. Malformations and Lethal Growths in Planaria Treated with Carcinogens. Natl. Cancer Inst. Monogr. 31: 683-691. 1969.

RTLA 2. Earthworm, Lumbricus terrestris

Material: Fifteen slides; 4 photographs

Diagnosis: A large protruding mass containing spermatogonia and maturation phases of sperm occurring in an area that had received 14 daily paintings on the cuticle of a methylcholanthrene-acetone solution.

Submitter: R. L. Hancock

Reprint: Hancock, R. L. An Unusual Neoplasm in Lumbricus terrestris. Experientia, 21(5): 280-281. 1965.

RTLA 3. Drosophila melanogaster

Material: Five slides; 6 photographs

Diagnosis: Hereditary ovarian tumors

Submitter: R. C. King

Reprint: King, Robert C. Control of Oocyte Formation by Female-Sterile (fes) Drosophila melanogaster. Natl. Cancer Inst. Monogr. 31: 347-349. 1969.

RTLA 4. Blue crab, Callinectes sapidus

Material: One crab; 3 photographs; 40 slides; 2 paraffin blocks

Diagnosis: Wound healing on dorsal cephalothorax

Submitter: C. J. Dawe

RTLA 5. Mud clam, Mya arenaria

Material: One siphon; 3 photographs; 17 slides with serial sections

Diagnosis: Developmental anomaly of siphon

Submitter: M. Potter and E. Kuff

RTLA 6. Striped bass, Morone saxatilis

Material: Testes -- one with adjacent mass; 1 photograph; 1 slide

Diagnosis: Spermatocoele

Submitter: F. Schwartz

- RTLA 7. White sucker, Catostomus commersoni  
 Material: Three fish; 3 slides  
 Diagnosis: Cholangiocellular neoplasms; no evidence of metastases  
 Submitter: C. J. Dawe, M. Stanton, and F. Schwartz  
 Reprint: Dawe, Clyde J., Mearl F. Stanton, and Frank J. Schwartz.  
 Hepatic Neoplasms in Native Bottom-feeding Fish of Deep  
 Creek Lake, Maryland. Cancer Res., 24(7): 1194-1201. 1964.
- RTLA 8. Brown bullhead, Ictalurus nebulosus  
 Material: One fish; 2 slides  
 Diagnosis: (1) Regenerative hepatic nodules  
 (2) Minimal deviation hepatomas  
 Submitter: C. J. Dawe and M. Stanton  
 Reprint: [see RTLA 7]
- RTLA 9. Brown bullhead, Ictalurus nebulosus  
 Material: Three slides; 1 photograph  
 Diagnosis: Chronic inflammation -- foreign body reaction  
 Submitter: C. J. Dawe
- RTLA 10. Chain pickerel, Esox niger  
 Material: Two slides  
 Diagnosis: Pseudobranch (normal)  
 Submitter: C. J. Dawe
- RTLA 11. Goldfish, Carassius auratus  
 Material: Two slides  
 Diagnosis: Neurilemmoma  
 Submitter: T. M. Scotti
- RTLA 12. Green turtle, Chelonia mydas  
 Material: Three bottles of wet tissue; 4 photographs; 2 slides  
 Diagnosis: Fibropapillomas  
 Submitter: G. H. Waddell
- RTLA 13. Shark  
 Material: Wet tissue; 4 slides; 2 photographs  
 Diagnosis: (1) Subepicardial hemorrhages in association with  
 lymphoid aggregates  
 (2) Myocardial infestation by indeterminate  
 organism -- possible sarcosporidia  
 Submitter: R. F. Mathewson
- RTLA 14. Largemouth bass, Micropterus salmoides  
 Material: One fish; 1 slide; 4 photographs  
 Diagnosis: Intra-epidermal nevus  
 Submitter: C. J. Dawe
- RTLA 15. Largemouth bass, Micropterus salmoides  
 Material: One fish; 1 slide, 5 photographs  
 Diagnosis: Ossifying fibroma  
 Submitter: C. J. Dawe

- RTLA 16. Largemouth bass, Micropterus salmoides  
 Material: One fish; 4 slides; 3 photographs  
 Diagnosis: Intraepithelial hyperpigmentation by numerous dendritic melanocytes in all layers of epidermis  
 Submitter: C. J. Dawe
- RTLA 17. Dagger shrimp, Palaemonetes pugio  
 Material: One slide  
 Diagnosis: Metacercaria of Microphallus turgida infected with a haplosporidium, Urosporidium fuliginosum  
 Submitter: R. W. Heard
- RTLA 18. Atlantic needlefish, Strongylura marina  
 Material: Sixteen heads of fish; 3 slides; photographs  
 Diagnosis: Chronic inflammation due to copepod parasites in the jaw  
 Submitter: J. M. Arnold  
 Reprint: Cressey, Roger F. and Bruce B. Collette. Copepods and Needlefishes: A Study in Host-Parasite Relationships. U.S. Fish Wildl. Serv. Fish. Bull., 68(3): 347-432. 1970.
- RTLA 19. Atlantic octopus, Octopus vulgaris  
 Material: One paraffin embedded block; 5 slides; 2 photographs  
 Diagnosis: Probable wound repair and hyperplasia in web area between the two anterior arms  
 Submitter: J. M. Arnold
- RTLA 20. California sea mussel, Mytilus californianus  
 Material: Two slides  
 Diagnosis: Digestive gland lesions caused by haplosporidian parasites  
 Submitter: R. L. Taylor  
 Reprint: Taylor, Ronald L. Haplosporidium tumefacientis sp. n., the Etiologic Agent of a Disease of the California Sea Mussel, Mytilus californianus Conrad. J. Invertebr. Pathol., 8(1): 109-121. 1966.
- RTLA 21. Gaper clam, Tresus nuttalli  
 Material: Two slides  
 Diagnosis: Inflammatory reaction of foot muscle; associated with unclassified microbes producing exophytic lesions  
 Submitter: R. L. Taylor and A. C. Smith  
 Reprint: Taylor, Ronald L. and Albert C. Smith. Polypoid and Papillary Lesions in the Foot of the Gaper Clam, Tresus nuttalli. J. Invertebr. Pathol., 8(2): 264-266. 1966.
- RTLA 22. Walleye, Stizostedion vitreum vitreum  
 Material: One fish; 14 slides  
 Diagnosis: Lymphocystis  
 Submitter: M. Stanton
- RTLA 23. Chain pickerel, Esox niger  
 Material: Two slides  
 Diagnosis: Parasitic infestation of gills; unclassified protozoan  
 Submitter: C. J. Dawe

- RTLA 24. White sucker, Catostomus commersoni  
 Material: One fish  
 Diagnosis: Ovarian cyst (non-neoplastic)  
 Submitter: M. Stanton
- RTLA 25. Rainbow trout, Salmo gairdneri  
 Material: Three jars of gross specimens; 16 photographs  
 Diagnosis: Hepatoma  
 Submitter: C. E. Dunbar
- RTLA 26. Drosophila melanogaster  
 Material: One block; 9 slides; 14 photographs  
 Diagnosis: Melanotic lesions involving fat body  
 Submitter: S. Ghellevitch  
 Reprint: Ghellevitch, Sabbas. Effets tumorigènes de la leucine, de l'uridine et de la thymidine tritiées chez les larves de la Drosophile. C. R. Hebd. Seances Acad. Sci., Ser. D, Sci. Nat. (Paris), 262: 1173-1176. 1966.
- RTLA 27. Spruce sawfly, Diprion hercyniae  
 Material: Twelve adults; 3 pupae; numerous midgut tumorlike bodies; 42 slides  
 Diagnosis: Polyhedral virus infection  
 Submitter: M. M. Neilson  
 Reprint: Neilson, M. M. and D. E. Elgee. Tumorlike Bodies in Virus-Infected and Noninfected Adults of the Spruce Sawfly, Diprion hercyniae. J. Invertebr. Pathol., 10: 70-75. 1968.
- RTLA 28. Greater wax moth, Galleria mellonella  
 Material: Three slides; 15 photographs  
 Diagnosis: Whorl formations in irradiated animals by hemocytes  
 Submitter: J. C. Harshbarger  
 Reprint: Harshbarger, John C. and B. Shain Moore. Some Effects of X-irradiation on Larvae of Galleria mellonella. J. Invertebr. Pathol., 8(2): 277-279. 1966.
- RTLA 29. Sea lamprey, Petromyzon marinus  
 Material: Two pieces of skin; 10 slides  
 Diagnosis: Inflammation associated with bacterial infection  
 Submitter: L. N. Allison
- RTLA 30. Planarian, Dugesia dorotocephala  
 Material: Four adult planarians; 66 slides; photographs  
 Diagnosis: Swellings -- dorsum of tail; indeterminate nature  
 Submitter: R. Kenk
- RTLA 31. Claw-footed toad, Xenopus laevis  
 Material: One block of fixed material; 4 photographs; 18 slides  
 Diagnosis: Tuberculoma -- leg muscle  
 Submitter: E. Elkan

- RTLA 32. Claw-footed toad, Xenopus laevis  
Material: One block of fixed material; 4 slides  
Diagnosis: Nephroblastoma  
Submitter: E. Elkan  
Reprint: Elkan, E. Three Different Types of Tumors in Salientia. Cancer Res., 23(10): 1641-1645. 1963.
- RTLA 33. Earthworm, Lumbricus terrestris  
Material: One earthworm; 10 slides; 4 photographs  
Diagnosis: Contracted scar due to injury plus multiple parasitic lesions  
Submitter: E. Holland
- RTLA 34. Painted turtle, Chrysemys picta  
Material: Head of turtle; 12 slides; 7 photographs  
Diagnosis: Otitis media with foreign body reaction  
Submitter: H. Miller
- RTLA 35. Pond snail, Physa heterostropha  
Material: Two slides  
Diagnosis: "Cyst-like" bodies primarily on reproductive organs due to microsporidian parasite  
Submitter: E. H. Michelson  
Reprint: Michelson, Edward H. Plistophora husseyi sp. n., a Microsporidian Parasite of Aquatic Pulmonate Snails. J. Insect Pathol., 5(1): 28-38. 1963.
- RTLA 36. Bilharzia snail, Australorbis glabratus  
Material: Three slides  
Diagnosis: Tubercle-like lesions of tentacles and head region due to infection by acid-fast bacteria  
Submitter: E. H. Michelson
- RTLA 37. Pacific oyster, Crassostrea gigas  
Material: Thirty-seven slides; 4 blocks  
Diagnosis: Fibrous tumor of gonadal origin  
Submitter: G. B. Pauley  
Reprint: Pauley, Gilbert B. and Clyde S. Sayce. An Internal Fibrous Tumor in a Pacific Oyster Crassostrea gigas. J. Invertebr. Pathol., 10(1): 1-8. 1968.
- RTLA 38. Freshwater mussel, Anodonta californiensis  
Material: Eight slides; 1 block  
Diagnosis: Polypoid hyperplasia of submucosal glands of foot  
Submitter: G. B. Pauley  
Reprint: Pauley, Gilbert B. Four Freshwater Mussels (Anodonta californiensis) with Pedunculated Adenomas Arising from the Foot. J. Invertebr. Pathol., 9(4): 459-466. 1967.
- RTLA 39. Hydra  
Material: One slide  
Diagnosis: Developmental anomaly; teratogenesis (?)  
Submitter: E. Holland

- RTLA 40. Hydra  
 Material: Normal; budding and degenerate growths; 14 slides;  
 4 photographs  
 Diagnosis: Developmental anomaly; teratogenesis (?)  
 Submitter: E. Holland
- RTLA 41. Leopard frog, Rana pipiens  
 Material: One kidney; 3 photographs; 10 slides  
 Diagnosis: Urethane-induced renal adenocarcinoma  
 Submitter: J. S. Waterhouse
- RTLA 42. Seahorse, Hippocampus sp.  
 Material: One gross specimen (mass near eye); 8 slides  
 Diagnosis: Parasitic lesion -- probably microsporidian  
 Submitter: M. M. Sigel
- RTLA 43. European corn borer, Ostrinia nubilalis  
 Material: One larva; 6 photographs; 34 slides  
 Diagnosis: Pigmented cuticular projection with underlying hemocyte  
 reaction  
 Submitter: H. L. Zimmack
- RTLA 44. Leafhopper, Agallia constricta  
 Material: Two electron photomicrographs; 6 photographs  
 Diagnosis: Ganglion cells infected with wound tumor virus  
 Submitter: K. Maramorosch  
 Reprint: Maramorosch, K., E. Shikata, H. Hirumi, and R. R. Granados.  
 Multiplication and Cytopathology of a Plant Tumor Virus in  
 Insects. Natl. Cancer Inst. Monogr. 31: 493-507. 1969.
- RTLA 45. Khapra beetle, Trogoderma granarium  
 Material: Six adult beetles  
 Diagnosis: Cuticular deformations  
 Submitter: R. G. Strong  
 Reprint: Strong, R. G. On Deformities of the Khapra Beetle,  
Trogoderma granarium Everts (Coleoptera: Dermestidae).  
 Wasmann J. Biol., 17(2): 273-278. 1959.
- RTLA 46. Granary weevil, Sitophilus granarius  
 Material: One adult weevil  
 Diagnosis: Cuticular deformations  
 Submitter: R. G. Strong  
 Reprint: Strong, R. G. To the Teratology of the Granary Weevil,  
Sitophilus granarius (Linnaeus) (Coleoptera: Curculionidae).  
 Wasmann J. Biol., 17(1): 65-68. 1959.
- RTLA 47. Variegated cutworm, Peridroma saucia  
 Material: One slide; 4 photographs  
 Diagnosis: Granulosis virus infection showing hyperplasia, chromosome  
 bridges and fragments, and multipolar filaments in the  
 fat body  
 Submitter: M. E. Martignoni  
 Reprint: Martignoni, Mauro E. and James E. Milstead. Glutamate-  
 Aspartate Transaminase Activity in the Blood Plasma of  
 an Insect During the Course of Two Viral Diseases. Ann.  
 Entomol. Soc. Am., 60(2): 428-431. 1967.

- RTLA 48. Variegated cutworm, Peridroma saucia  
 Material: One slide  
 Diagnosis: Granulosis virus infection showing nodule ("giant cell") formation in the hemocoel  
 Submitter: M. E. Martignoni  
 Reprint: [see RTLA 47]
- RTLA 49. Drosophila melanogaster  
 Material: One slide; 2 photographs  
 Diagnosis: "Brown tumors" in brown tumor strain  
 Submitter: M. E. Martignoni
- RTLA 50. King crab, Limulus polyphemus  
 Material: One lateral eye; 4 photographs; 42 slides  
 Diagnosis: Foreign body with inflammatory reaction  
 Submitter: M. L. Behrens
- RTLA 51. Crab  
 Material: Portions of exoskeleton with protuberances  
 Diagnosis: Undetermined  
 Submitter: W. Schmitt and P. Kier
- RTLA 52. Hydra, Chlorohydra viridissima  
 Material: Three vials of hydra; 19 photographs; 7 slides  
 Diagnosis: Giant mutants; heterocytes; and normal individuals  
 Submitter: H. M. Lenhoff  
 Reprint: Lenhoff, Howard M., Charles Rutherford, and H. D. Heath. Anomalies of Growth and Form in Hydra: Polarity, Gradients, and a Neoplasia Analog. Natl. Cancer Inst. Monogr. 31: 709-737. 1969.
- RTLA 53. Queenfish, Seriplus politus  
 Material: Five fish; 9 photographs; 3 slides  
 Diagnosis: Focal swellings on lip; tissue too disrupted by freezing for diagnosis  
 Submitter: R. C. Fay
- RTLA 54. Coral, Madrepora kauaiensis  
 Material: Three photographs  
 Diagnosis: Anomalous growths; neoplasia versus reaction to parasites  
 Submitter: D. F. Squires  
 Reprints: Squires, Donald F. Neoplasia in a Coral? Science, 148(3669): 503-505. 1965.  
  
 White, Philip R. and John D. Soule [comments on Squires' article and Squires' rebuttal to their comments]. Science, 150(3692): 77-78. 1965.
- RTLA 55. American chameleon, Anolis carolinensis  
 Material: One adult chameleon  
 Diagnosis: Cyst on neck; probably inflammatory origin  
 Submitter: E. C. Bay



- RTLA 56. American cockroach, Periplaneta americana  
 Material: Eight slides; 8 vials of specimens; 36 photographs  
 Diagnosis: Abnormal salivary glands induced by ligature or nerve severance  
 Submitter: D. J. Sutherland  
 Reprints: Sutherland, D. J. Experimentally Induced Tumours in Periplaneta americana L. J. Insect Physiol., 9: 131-135. 1963.  
  
 Sutherland, Donald J. The Development of Salivary Tumours in Periplaneta americana (L.) as Induced by Duct Ligation. J. Insect Physiol., 13: 137-152. 1967.
- RTLA 57. Silver dollar or Spotted metynnis, Metynnis maculatus  
 Material: Gross specimen; 7 slides; 2 photographs  
 Diagnosis: Parasitic infestation (protozoan)  
 Submitter: M. Stanton
- RTLA 58. Yellowfin goby, Acanthogobius flavimanus  
 Material: Four fish; 9 slides; 4 photographs  
 Diagnosis: Epithelial papillomas  
 Submitter: Y. Ito
- RTLA 59. Crayfish, Procambarus clarki  
 Material: One crayfish  
 Diagnosis: Limb loss with failure of regeneration; etiology (?)  
 Submitter: C. A. G. Wiersma
- RTLA 60. Leopard frog, Rana pipiens  
 Material: Two slides  
 Diagnosis: Renal adenocarcinoma  
 Submitter: A. Granoff
- RTLA 61. Splitnose rockfish, Sebastes diploproa  
 Material: Nineteen slides; 47 photographs  
 Diagnosis: Lipoma  
 Submitter: J. C. Harshbarger  
 Reprint: Harshbarger, John C. and G. W. Bane. Case Report of a Fibrolipoma on a Rockfish, Sebastes diploproa. Natl. Cancer Inst. Monogr. 31: 219-221. 1969.
- RTLA 62. White croaker, Genyonemus lineatus  
 Material: Numerous fish; slides; photographs  
 Diagnosis: Epithelial papillomas  
 Submitter: J. C. Harshbarger  
 Reprint: Harshbarger, John C. Work of the Registry of Tumours in Lower Animals with Emphasis on Fish Neoplasms. Symp. Zool. Soc. London, No. 30: 285-303. 1972.
- RTLA 63. Giant leathery turtle, Dermochelys coriacea  
 Material: Nine slides; 3 photographs  
 Diagnosis: Granulomatous reaction; etiology (?)  
 Submitter: J. R. Hendrickson

- RTLA 64. Nudibranch, Hermisenda crossicornis  
 Material: Two electron photomicrographs  
 Diagnosis: Unclassified microorganism in receptor cells  
 Submitter: J. Westfall
- RTLA 65. House fly, Musca domestica  
 Material: Nineteen photographs  
 Diagnosis: Focal lesions in hypodermis, midgut, and fat bodies induced by carcinogenic fluorenamine derivatives  
 Submitter: G. E. Cantwell  
 Reprint: Shortino, Thomas J., George E. Cantwell, and W. E. Robbins. Effect of Certain Carcinogenic 2-Fluorenamine Derivatives on Larvae of the House Fly, Musca domestica Linnaeus. J. Insect Pathol., 5: 489-497. 1963.
- RTLA 66. Guppy, Poecilia reticulata  
 Material: Gross specimens  
 Diagnosis: Infected with gram negative rod-shaped bacteria  
 Submitter: T. Kozma
- RTLA 67. Red-spotted newt, Notophthalmus viridescens  
 Material: One gross specimen; 4 slides; 17 photographs  
 Diagnosis: Helminth cysts  
 Submitter: H. Evans
- RTLA 68. Locusta migratoria  
 Material: Seven slides; 4 photographs  
 Diagnosis: Gregarine parasitic infestation  
 Submitter: G. Matz
- RTLA 69. Madeira cockroach, Leucophaea maderae  
 Material: Two slides  
 Diagnosis: Salivary reservoir lesions resulting from nerve severance  
 Submitter: G. Matz  
 Reprint: Matz, G. Tumeurs Expérimentales chez Leucophaea maderae F. et Locusta migratoria L. J. Insect Physiol., 6: 309-313. 1961.
- RTLA 70. Alpine newt, Triturus alpestris  
 Material: Four slides  
 Diagnosis: Epithelioma  
 Submitter: G. Matz  
 Reprint: Matz, Gilbert. Un Cas d'Épithélioma Épidermique chez Triturus alpestris Laur. (Amphibien, Salamandridé). Bull. Soc. Zool. France, 91(4): 707-708 and one Plate. 1966.
- RTLA 71. Acipenseriformes  
 Material: Three specimens  
 Diagnosis: Ridge scales and fin spines (fossils)  
 Submitter: J. T. Gregory

- RTLA 72. Osteichthyes  
 Material: Three specimens  
 Diagnosis: Pachyostose operculars (fossils)  
 Submitter: J. T. Gregory
- RTLA 73. American bullfrog, Rana catesbeiana  
 Material: Fourteen paraffin blocks; 3 photographs; 7 slides  
 Diagnosis: Inflammatory lesions  
 Submitter: D. DuBois
- RTLA 74. Snapping turtle, Chelydra serpentina  
 Material: Eleven paraffin blocks; 3 photographs; slides  
 Diagnosis: Degenerative lesions  
 Submitter: D. DuBois
- RTLA 75. Guppy, Poecilia reticulata  
 Material: Thirteen fish -- 6 with thoracic teratomas; 96 slides;  
 21 photographs  
 Diagnosis: Teratoid anomalies  
 Submitter: R. Wenk
- RTLA 76. Moon snail, Polinices lewsi  
 Material: Three slides  
 Diagnosis: Infection -- with inflammatory reaction  
 Submitter: R. L. Taylor  
 Reprint: Smith, Albert C. and Ronald L. Taylor. Tumefactions  
 (Tumorlike Swellings) on the Foot of the Moon Snail  
Polinices lewsi. J. Invertebr. Pathol., 10(2):  
 263-268. 1968.
- RTLA 77. Rainbow trout, Salmo gairdneri  
 Material: Two fish; 5 livers; 12 slides  
 Diagnosis: (1) hepatomas; (2) trabecular hepatocarcinoma; and  
 (3) adenocarcinoma (carcinocarcinoma)  
 Submitter: J. H. Wales  
 Reprint: Wales, J. H. and R. O. Sinnhuber. An Early Hepatoma  
 Epizootic in Rainbow Trout, Salmo gairdneri. Calif.  
 Fish Game, 52: 85-91. 1966.
- RTLA 78. Spruce budworm, Choristoneura fumiferana  
 Material: Seventeen larvae and one pupa; 4 photographs  
 Diagnosis: Epidermal necrosis and hyperplasia with sloughing of  
 the cuticle possibly due to contact with a toxic material  
 Submitter: R. L. Lyon
- RTLA 79. Crayfish, Orconectes rusticus  
 Material: One slide  
 Diagnosis: Duct obstruction with necrosis and inflammatory  
 reaction in the hepatopancreas  
 Submitter: J. Hubschman
- RTLA 80. Earthworm, Lumbricus sp.  
 Material: One earthworm; 4 photographs; 10 slides  
 Diagnosis: Multiple parasitic lesions  
 Submitter: E. Holland

- RTLA 81. Drosophila melanogaster  
 Material: Three vials of adults; 4 photographs; a list of mutants that produce melanotic tumors; descriptions of mutants causing tumors; and a list of laboratories that carry tumorous stocks and the stocks they carry  
 Diagnosis: Freckled strain  
 Submitter: D. L. Lindsley
- RTLA 82. Dace  
 Material: One gross specimen; 7 photographs  
 Diagnosis: Parasitic cyst; myxosporida suspected  
 Submitter: R. D. Schick
- RTLA 83. Sea urchin test  
 Material: Six photographs and x-ray films  
 Diagnosis: Repair after transection of radial canals  
 Submitter: G. R. Clark, II
- RTLA 84. American brook lamprey, Lampetra lamottei  
 Material: One gross specimen; 8 photographs; 3 slides  
 Diagnosis: Multiple granulomas in response to helminth parasites  
 Submitter: J. H. Howell
- RTLA 85. Silkworm, Bombyx mori  
 Material: Seven slides  
 Diagnosis: Abnormal proliferation of epidermal cells in larvae infected with Tipula iridescent virus  
 Submitter: T. Hukuhara  
 Reprint: Hukuhara, Tosihiro. Induction of Epidermal Tumor in Bombyx mori (Linnaeus) with Tipula Iridescent Virus. J. Insect Pathol., 6: 246-248. 1964.
- RTLA 86. Brown bullhead, Ictalurus nebulosus  
 Material: One fish head; 4 photographs; 2 slides  
 Diagnosis: Melanoma  
 Submitter: L. N. Allison
- RTLA 87. Western fence lizard, Sceloporus occidentalis  
 Material: One gross lizard; 4 photographs  
 Diagnosis: Infectious granuloma; bacterial origin suspected  
 Submitter: C. Gans
- RTLA 88. Goldfish, Carassius auratus  
 Material: Two pieces of tissue; 6 slides; 3 photographs  
 Diagnosis: Fibromyxosarcoma  
 Submitter: Fisheries Research Board of Canada
- RTLA 89. Sea lamprey, Petromyzon marinus  
 Material: One gross lamprey; photographs; slides  
 Diagnosis: Melanoma with metastases  
 Submitter: J. H. Howell  
 Reprint: Dawe, C. J. and J. C. Harshbarger. Neoplasms in Feral Fishes: Their Significance to Cancer Research. (see "Papers in Press" on p. 7).

- RTLA 90. Housefly, Musca domestica  
 Material: Adult flies; 10 photographs  
 Diagnosis: (1) melanotic tumors  
 (2) melanotic sclerosis  
 Submitter: R. P. Bodnaryk  
 Reprint: Bodnaryk, Robert P. Dietary Amino Acid and Nucleic Acid Imbalance Leading to Altered Tumour Frequency in the Adult Housefly, Musca domestica. J. Insect Physiol., 14: 223-242. 1968.
- RTLA 91. Blue gourami, Trichogaster trichopterus  
 Material: Three blocks of tissue; 15 photographs; 16 slides  
 Diagnosis: Granulomatous inflammatory reaction involving gut, spleen, and liver  
 Submitter: D. O. Carpenter
- RTLA 92. Butter clam, Saxidomus giganteus  
 Material: One clam; 1 photograph; 10 slides; 2 blocks  
 Diagnosis: Polypoid developmental anomaly of foot  
 Submitter: G. Pauley  
 Reprint: [see RTLA 136]
- RTLA 93. Walleye, Stizostedion vitreum vitreum  
 Material: Head of fish; 5 photographs; 9 slides  
 Diagnosis: Multiple fibrosarcomas with ossification  
 Submitter: L. N. Allison
- RTLA 94. Painted turtle, Chrysemys picta  
 Material: One gross turtle; 14 photographs  
 Diagnosis: Epidermoid cyst on neck  
 Submitter: K. Potter
- RTLA 95. Garter snake, Thamnophis sirtalis  
 Material: Two slides  
 Diagnosis: (1) fibropapilloma  
 (2) sertoli cell tumor  
 Submitter: L. Karstad
- RTLA 96. Fox snake, Elaphe vulpina  
 Material: One snake with abdominal mass  
 Diagnosis: Pararenal hematoma  
 Submitter: C. Gans
- RTLA 97. Mud puppy, Necturus maculosus  
 Material: One kidney; 6 photographs; 6 slides  
 Diagnosis: Undifferentiated renal neoplasm; probably metastatic  
 Submitter: C. H. Nauman
- RTLA 98. Redtailed black shark, Labeo bicolor  
 Material: One gross fish; 14 photographs; 7 slides  
 Diagnosis: Infectious granuloma  
 Submitter: J. A. Zgurzynski

- RTLA 99. Bloater, Coregonus hoyi  
 Material: Rear half of fish; 8 photographs; 3 slides  
 Diagnosis: Spindle cell sarcoma (possible neural origin)  
 Submitter: L. N. Allison
- RTLA 100. Clematis blister beetle, Epicauta cinerea  
 Material: Gross specimens of gut; 15 slides; 12 photographs  
 Diagnosis: Hyperplastic outgrowths on midgut; etiology undetermined  
 Submitter: A. P. Gupta  
 Reprint: Gupta, A. P. Midgut lesions in Epicauta cinerea  
 (Coleoptera: Meloidae). Ann. Entomol. Soc. Am., 63:  
 1786-1788. 1970.
- RTLA 101. Black crappie, Pomoxis nigromaculatus  
 Material: One fish  
 Diagnosis: Lipoma; with large growth in anterior abdominal region  
 Submitter: G. W. Camenisch
- RTLA 102. Planarian, Dugesia dorotocephala  
 Material: One gross specimen; photographs  
 Diagnosis: Abnormal regeneration  
 Submitter: M. Jenkins
- RTLA 103. Spot, Leiostomus xanthurus  
 Material: One fish; 5 photographs; 19 slides  
 Diagnosis: Anterior abdominal tumor produced by a microsporidian  
 Submitter: V. Sprague  
 Reprint: Sprague, Victor. Microsporidia and Tumors with  
 Particular Reference to the Lesion Associated with  
Ichthyosporidium sp. Schwartz, 1963. Natl. Cancer  
 Inst. Monogr. 31: 237-249. 1969.
- RTLA 104. Earthworm, Lumbricus sp.  
 Material: One earthworm; 4 photographs  
 Diagnosis: Secondary tail of 15 segments  
 Submitter: E. Holland
- RTLA 105. Coho salmon, Oncorhynchus kisutch  
 Material: One fish fillet; 8 photographs; 10 slides  
 Diagnosis: Neurofibroma  
 Submitter: W. G. Yoder
- RTLA 106. Lingcod, Ophiodon elongatus  
 Material: Segment of animal with dorsal fin; 5 photographs; 2 slides  
 Diagnosis: Lymphocystis  
 Submitter: Fisheries Research Board of Canada
- RTLA 107. Sydney rock oyster (Australian), Crassostrea commercialis  
 Material: Twenty photographs; 17 slides  
 Diagnosis: Papillary epitheliomas of the mantle  
 Submitter: P. H. Wolf  
 Reprint: Wolf, Peter H. Neoplastic Growth in Two Sydney Rock  
 Oysters, Crassostrea commercialis (Iredale and Roughley).  
 Natl. Cancer Inst. Monogr. 31: 563-573. 1969.

- RTLA 108. Pacific oyster, Crassostrea gigas  
 Material: Four slides  
 Diagnosis: Ganglioneuromas; watery cyst  
 Submitter: G. B. Pauley  
 Reprint: Pauley, Gilbert B., Albert K. Sparks, and Clyde S. Sayce.  
 An Unusual Internal Growth Associated with Multiple  
 Watery Cysts in a Pacific Oyster (Crassostrea gigas).  
 J. Invertebr. Pathol., 11(3): 398-405. 1968.
- RTLA 109. Claw-footed toad, Xenopus laevis  
 Material: Fifteen slides  
 Diagnosis: Granulomatous disease containing acid-fast bacteria  
 Submitter: L. N. Ruben  
 Reprint: Ruben, L. N., M. Balls, J. Stevens, and N. S. Rafferty.  
 A New Transmissible Disease in the South African Clawed  
 Toad, Xenopus laevis. Oncology, 23: 228-237. 1969.
- RTLA 110. Giant conch, Strombus gigas  
 Material: Two slides  
 Diagnosis: Inflammatory reaction; cause indeterminate  
 Submitter: M. M. Sigel
- RTLA 111. Moray  
 Material: Two slides  
 Diagnosis: Nonsuppurative panniculitis  
 Submitter: M. M. Sigel
- RTLA 112. Northern pike, Esox lucius  
 Material: Gross specimens from the jaws and trunks; 3 slides  
 Diagnosis: Lymphosarcomas  
 Submitter: M. F. Mulcahy  
 Reprint: Mulcahy, Maire F., Goesta Winqvist, and Clyde J. Dawe.  
 The Neoplastic Cell Type in Lymphoreticular Neoplasms of  
 the Northern Pike, Esox lucius L. Cancer Res., 30(11):  
 2712-2717. 1970.
- RTLA 113. Box turtle, Terrapene carolina  
 Material: Three slides  
 Diagnosis: Ear infection  
 Submitter: W. Dix
- RTLA 114. Coral, several species  
 Material: Twenty-one photographs  
 Diagnosis: Anomalous growths; neoplasia versus reaction to parasites  
 Submitter: D. F. Squires
- RTLA 115. Mud clam, Mya arenaria  
 Material: Seven slides  
 Diagnosis: Papillary lesions at pedal orifice  
 Submitter: P. R. Nelson
- RTLA 116. Boa constrictor, Boa constrictor  
 Material: Two bottles of tissue; 45 slides; 8 photographs  
 Diagnosis: Infectious granulomas of indeterminate etiology  
 Submitter: B. L. Burge

- RTLA 117. Cobra, Naja naja  
 Material: Heart and tumor-like growth of specimen  
 Diagnosis: Fibrinous pericarditis and subepicardial myocarditis  
 Submitter: W. E. Haast
- RTLA 118. Largescale sucker, Catostomus macrocheilus  
 Material: Specimen of anal fin; 7 photographs; 2 slides  
 Diagnosis: Papillary epithelioma (non-invasive)  
 Submitter: J. R. Adams
- RTLA 119. Planarians, Dugesia and Crenobia  
 Material: Seven slides  
 Diagnosis: Histopathologic effects of insecticides  
 Submitter: H. An der Lan  
 Reprint: An der Lan, Hannes. Histopathologische Auswirkungen von Insektiziden (DDT und Sevin) bei Wirbellosen und ihre cancerogene Beurteilung. Mikroskopie, 17: 85-112. 1962.
- RTLA 120. Water snake, Xenochrophis piscator  
 Material: Nine slides; 8 photographs  
 Diagnosis: Granulomas  
 Submitter: P. Zwart
- RTLA 121. Green turtle, Chelonia mydas  
 Material: Six bottles of specimens; 5 slides; 27 photographs  
 Diagnosis: Fibroma  
 Submitter: A. C. Smith
- RTLA 122. Skipjack tuna, Euthynnus pelamis  
 Material: Two photographs; 2 slides  
 Diagnosis: Puffy snout disease (fibrosis and inflammation)  
 Submitter: J. C. Marr
- RTLA 123. Mountain pine beetle, Dendroctonus ponderosae  
 Material: Three beetles with cuticular vesicle on elytral declivities  
 Diagnosis: Possible physical trauma in emergence  
 Submitter: G. D. Amman
- RTLA 124. Firemouth, Cichlasoma meeki  
 Material: One fish; 2 slides; 11 photographs  
 Diagnosis: Mechanical injury  
 Submitter: H. McCarthy
- RTLA 125. Pilot black snake, Elaphe obsoleta obsoleta  
 Material: One snake; 9 slides; 7 photographs  
 Diagnosis: Infectious granuloma  
 Submitter: R. Tuck, Jr.
- RTLA 126. Edible shrimp, Penaeus aztecus  
 Material: Two gross specimens; 10 photographs  
 Diagnosis: Ulcerative ventral lesion posterior to walking legs  
 Submitter: R. Neal



- RTLA 127. Northern pike, Esox lucius  
 Material: Three slides  
 Diagnosis: Lymphosarcoma  
 Submitter: R. F. Nigrelli  
 Reprint: Nigrelli, Ross F. Spontaneous Neoplasms in Fishes. III. Lymphosarcoma in Astyanax and Esox. Zoologica (N. Y.), 32(2): 101-108. 1947.
- RTLA 128. Lightning bug, Photurus sp.  
 Material: Four specimens; 5 photographs  
 Diagnosis: Late stage of wound repair  
 Submitter: M. McLean
- RTLA 129. Bullhead, Ictalurus sp.  
 Material: Gross specimen; 17 slides; 6 photographs  
 Diagnosis: Melanoma  
 Submitter: J. J. Christian
- RTLA 130. Neotropical race runner, Cnemidophorus lemniscatus  
 Material: Gross specimen; 24 photographs; 9 slides  
 Diagnosis: Multiple infectious bacterial granuloma  
 Submitter: R. Tuck, Jr.
- RTLA 131. Hydrazoid, Bimera sp.  
 Material: Gross specimen; 6 photographs  
 Diagnosis: Pending  
 Submitter: H. Park
- RTLA 132. Freshwater mussel, Anodonta californiensis  
 Material: Nine gross specimens  
 Diagnosis: Polypoid hyperplasia  
 Submitter: G. B. Pauley; Reprint: [see RTLA 140]
- RTLA 133. Freshwater mussel, Anodonta oregonensis  
 Material: Gross specimen  
 Diagnosis: Polypoid hyperplasia  
 Submitter: G. B. Pauley; Reprint: [see RTLA 140]
- RTLA 134. Oyster, Crassostrea gigas  
 Material: Gross specimen  
 Diagnosis: Large watery cyst anterior to heart  
 Submitter: G. B. Pauley; Reprint: [see RTLA 108]
- RTLA 135. Oyster, Crassostrea gigas  
 Material: One slide  
 Diagnosis: Endematous mesenchymal tumor  
 Submitter: G. B. Pauley and A. K. Sparks; Reprint: Sparks, Albert K., Gilbert B. Pauley, and Kenneth K. Chew. A Second Mesenchymal Tumor From a Pacific Oyster (Crassostrea gigas). Proc. Natl. Shellfish. Assoc., 59: 35-39. 1969.
- RTLA 136. Smooth Washington clam, Saxidomus giganteus  
 Material: Two slides; 1 block  
 Diagnosis: Polypoid tumor on foot  
 Submitter: G. B. Pauley; Reprint: Pauley, Gilbert B. A Butter Clam (Saxidomus giganteus) with a Polypoid-Tumor on the Foot. J. Invertebr. Pathol., 9(4): 577-579. 1967.

- RTLA 137. Freshwater mussel, Margaritifera margaritifera  
Material: Two slides; 1 block  
Diagnosis: Polypoid tumor on foot  
Submitter: G. B. Pauley  
Reprint: Pauley, Gilbert B. A Disease of the Freshwater Mussel, Margaritifera margaritifera. J. Invertebr. Pathol., 12(3): 321-328. 1968.
- RTLA 138. Freshwater mussel, Margaritifera margaritifera  
Material: One slide; 2 blocks  
Diagnosis: Polypoid tumor on foot  
Submitter: G. B. Pauley  
Reprint: [see RTLA 140]
- RTLA 139. Freshwater mussel, Margaritifera margaritifera  
Material: One slide; 1 block  
Diagnosis: Polypoid tumor on foot  
Submitter: G. B. Pauley  
Reprint: [see RTLA 140]
- RTLA 140. Freshwater mussel, Anodonta oregonensis  
Material: One slide  
Diagnosis: Incipient polypoid tumors on foot  
Submitter: G. B. Pauley  
Reprint: Pauley, Gilbert. A Critical Review of Neoplasia and Tumor-Like Lesions in Mollusks. Natl. Cancer Inst. Monogr. 31: 509-539. 1969.
- RTLA 141. Freshwater mussel, Anodonta californiensis  
Material: Three slides  
Diagnosis: Edematous hyperplasia of gill  
Submitter: G. B. Pauley  
Reprint: [see RTLA 140]
- RTLA 142. Freshwater mussel, Anodonta californiensis  
Material: Six slides  
Diagnosis: (1) Polypoid tumor on foot  
(2) Hyperplasia on gill  
Submitter: G. B. Pauley  
Reprint: [see RTLA 140]
- RTLA 143. Freshwater mussel, Anodonta californiensis  
Material: One slide; 4 blocks  
Diagnosis: Incipient polypoid tumors on foot  
Submitter: G. B. Pauley  
Reprint: [see RTLA 38]
- RTLA 144. Freshwater mussel, Anodonta californiensis  
Material: Seven slides including 3 autoradiographs  
Diagnosis: Polypoid tumors on foot  
Submitter: G. B. Pauley  
Reprint: [see RTLA 38]

- RTLA 145. Freshwater mussel, Anodonta californiensis  
 Material: Two slides  
 Diagnosis: Polypoid tumors on foot  
 Submitter: G. B. Pauley  
 Reprint: [see RTLA 38]
- RTLA 146. Freshwater mussel, Margaritifera margaritifera  
 Material: Nine slides; 9 blocks  
 Diagnosis: Edematous cysts "spongy disease"  
 Submitter: G. B. Pauley  
 Reprint: [see RTLA 137]
- RTLA 147. Soft-shell clam, Mya arenaria  
 Material: Three slides  
 Diagnosis: Fungiform smooth muscle tumor on siphon  
 Submitter: G. B. Pauley and T. Cheng  
 Reprint: Pauley, Gilbert B. and Thomas C. Cheng. A Tumor on the Siphons of a Soft-Shell Clam, Mya arenaria. J. Invertebr. Pathol., 11(3): 504-506. 1968.
- RTLA 148. Freshwater mussel, Gonidea angulata  
 Material: Four slides; 2 blocks  
 Diagnosis: Polypoid tumor on foot  
 Submitter: G. B. Pauley  
 Reprint: [see RTLA 140]
- RTLA 149. Freshwater mussel, Gonidea angulata  
 Material: Five slides; 1 block  
 Diagnosis: Polypoid tumor on foot with collagenous stroma  
 Submitter: G. B. Pauley  
 Reprint: [see RTLA 140]
- RTLA 150. American oyster, Crassostrea virginica  
 Material: One paraffin block; 9 slides  
 Diagnosis: Mesenchymal neoplasms; possibly reticulum cell sarcomas  
 Submitter: J. A. Couch  
 Reprint: Couch, J. A. Sarcoma-Like Disease in a Single Specimen of the American Oyster. In: Comparative Leukemia Research 1969, Bibl. haemat., No. 36, R. M. Dutcher (ed.), p. 647 (Karger, Basel/München/Paris/New York 1970). (Abstract).
- RTLA 151. Sydney rock oyster, Crassostrea commercialis  
 Material: Five slides; 1 photograph  
 Diagnosis: Epithelial papilloma  
 Submitter: P. H. Wolf  
 Reprint: [see RTLA 107]
- RTLA 152. Sydney rock oyster, Crassostrea commercialis  
 Material: Three slides; 2 paraffin blocks; 1 photograph  
 Diagnosis: Epithelial papilloma  
 Submitter: P. H. Wolf  
 Reprint: [see RTLA 107]

- RTLA 153. Pacific oyster, Crassostrea gigas  
 Material: Two slides  
 Diagnosis: Mesenchymal tumor  
 Submitter: A. K. Sparks  
 Reprint: Sparks, Albert K., Gilbert B. Pauley, Richard R. Bates, and Clyde S. Sayce. A Mesenchymal Tumor in a Pacific Oyster, Crassostrea gigas (Thunberg). J. Insect Pathol., 6(4): 448-452. 1964.
- RTLA 154. Pacific oyster, Crassostrea gigas  
 Material: Two slides  
 Diagnosis: Fecal impaction; possibly due to congenital stenosis  
 Submitter: A. K. Sparks  
 Reprint: Sparks, Albert K., Gilbert B. Pauley, Richard R. Bates, and Clyde S. Sayce. A Tumorlike Fecal Impaction in a Pacific Oyster, Crassostrea gigas (Thunberg). J. Insect Pathol., 6(4): 453-456. 1964.
- RTLA 155. Littleneck clam, Venerupis staminea  
 Material: One slide  
 Diagnosis: Infestation with larval cestode, Echeneibothrium sp.  
 Submitter: A. K. Sparks  
 Reprint: Sparks, Albert K. and Kenneth K. Chew. Gross Infestation of the Littleneck Clam, Venerupis staminea, with a Larval Cestode (Echeneibothrium sp.). J. Invertebr. Pathol., 8(3): 413-416. 1966.
- RTLA 156. Smallmouth bass, Micropterus dolomieu  
 Material: One excised tumor; 4 slides; 4 photographs  
 Diagnosis: Fibrovascular tumor; lymphangioma (?); mesothelioma (?)  
 Submitter: W. G. Yoder
- RTLA 157. Pacific cod, Gadus macrocephalus  
 Material: Gross specimens; 21 slides; 7 photographs  
 Diagnosis: Adenoma of parabranial body -- tentative diagnosis based on poorly fixed tissue  
 Submitter: C. D. Levings
- RTLA 158. Earthworm, Lumbricus terrestris  
 Material: Fourteen slides  
 Diagnosis: Epithelioma-like lesion following cold injury  
 Submitter: H. I. Firminger  
 Reprint: Firminger, H. I., Sandra Antoine, and Elijah Adams. Epithelioma-Like Lesion in Lumbricus terrestris After Cold Injury. Natl. Cancer Inst. Monogr. 31: 645-653. 1969.
- RTLA 159. Planarian, Dugesia dorotocephala  
 Material: Seven slides  
 Diagnosis: "Curly-tail disease" -- intranuclear inclusion bodies in some neoblasts are suspected as being viruses  
 Submitter: C. J. Dawe  
 Reprint: Dawe, Clyde J. Invertebrate Animals in Cancer Research. GANN Monogr. 5: 45-55. 1968.

- RTLA 160. Sydney rock oyster, Crassostrea commercialis  
 Material: One gross specimen  
 Diagnosis: Papillary epithelioma of mantle  
 Submitter: P. H. Wolf  
 Reprint: [see RTLA 107]
- RTLA 161. Sydney rock oyster, Crassostrea commercialis  
 Material: One gross specimen; 1 photograph  
 Diagnosis: Papillary epithelioma of mantle  
 Submitter: P. H. Wolf  
 Reprint: [see RTLA 107]
- RTLA 162. Sydney rock oyster, Crassostrea commercialis  
 Material: One gross specimen; 1 photograph  
 Diagnosis: Papillary epithelioma of mantle  
 Submitter: P. H. Wolf  
 Reprint: [see RTLA 107]
- RTLA 163. Walleye, Stizostedion vitreum vitreum  
 Material: One gross specimen; 3 slides; 8 photographs  
 Diagnosis: (1) lymphocystis  
 (2) dermal sarcoma  
 Submitter: R. Walker  
 Reprint: Walker, Roland. Lymphocystis Warts and Skin Tumors of Walleyed Pike. Rensselaer Rev. Grad. Studies, No. 14, pp. 1-5, Rensselaer Polytechnic Institute, Troy, N.Y. 1958.
- RTLA 164. Walleye, Stizostedion vitreum vitreum  
 Material: Three paraffin blocks; 2 slides  
 Diagnosis: Epithelioma  
 Submitter: R. Walker  
 Reprints: Walker, Roland. Virus Associated with Epidermal Hyperplasia in Fish. Natl. Cancer Inst. Monogr. 31: 195-207. 1969.  
 Walker, Roland. Epidermal Hyperplasia in Fish: Two Types Without Visible Virus. Natl. Cancer Inst. Monogr. 31: 209-213. 1969.
- RTLA 165. English sole, Parophrys vetulus  
 Material: Four groups of gross specimens  
 Diagnosis: Cuticular papillomas  
 Submitter: R. C. Cooper and C. A. Keller  
 Reprint: Cooper, Robert C. and Carl A. Keller. Epizootiology of Papillomas in English Sole, Parophrys vetulus. Natl. Cancer Inst. Monogr. 31: 173-185. 1969.
- RTLA 166. Ramirez's dwarf cichlid, Apistogramma ramirezi  
 Material: One gross specimen; 5 photographs; 3 slides  
 Diagnosis: Lymphocystis  
 Submitter: R. Kanazawa

- RTLA 167. Eastern coral snake, Micrurus fulvius fulvius  
 Material: Two pieces of tissue; 6 photographs; 12 slides  
 Diagnosis: Acute necrotizing pneumonitis with multiple small abscesses  
 Submitter: W. E. Haast
- RTLA 168. Sea hare, Aplysia californica  
 Material: Gross specimen; 28 slides  
 Diagnosis: Obstructed albumen gland (?)  
 Submitter: D. O. Carpenter
- RTLA 169. Earthworm, Lumbricus sp.  
 Material: One gross specimen; 6 photographs; 10 slides  
 Diagnosis: Supernumerary clitellum  
 Submitter: E. Holland
- RTLA 170. Skipjack tuna, Euthynnus pelamis  
 Material: Gross specimen; 5 photographs; 3 slides  
 Diagnosis: Hematoma; no infection; blood cells broken down indicating rather old condition  
 Submitter: J. C. Marr
- RTLA 171. American oyster, Crassostrea virginica  
 Material: Six panels with 43 specimens of shells with abnormalities of growth and malformations in the shell; 1 photograph  
 Diagnosis: Panel 1. Normal shells  
 Panel 2. Shift in direction of the principle axis of growth  
 Panel 3. Repair of shell injuries  
 Panel 4. Formation of cysts  
 Panel 5. Massive calcite deposits and pearl-like structures  
 Panel 6. Abnormal growth of right valve  
 Submitter: P. S. Galtsoff  
 Reprint: Galtsoff, Paul S. Anomalies and Malformations in the Shells of Crassostrea virginica. Natl. Cancer Inst. Monogr. 31: 575-580. 1969.
- RTLA 172. Leopard frog, Rana pipiens  
 Material: Twelve slides; 1 gross specimen; 1 photograph; 1 summary sheet of research program; and 1 list of frog kidney tumor specimens available at Trinity College, Washington, D.C.  
 Diagnosis: Renal adenocarcinoma  
 Submitter: G. S. King
- RTLA 173. Angelfish, Pterophyllum scalare  
 Material: Two slides  
 Diagnosis: Lymphocystis  
 Submitter: M. M. Sigel
- RTLA 174. Moray  
 Material: Four slides  
 Diagnosis: Granulomatous inflammatory reaction; etiology unknown  
 Submitter: M. M. Sigel

- RTLA 175. Conch  
 Material: Seven slides  
 Diagnosis: Indeterminant  
 Submitter: M. M. Sigel
- RTLA 176. Bloater, Coregonus hoyi  
 Material: Two fish (dressed); 11 photographs; 11 slides  
 Diagnosis: Myxomatous lesion induced by unidentified organism  
 Submitter: L. N. Allison
- RTLA 177. White sucker, Catostomus commersoni  
 Material: One gross animal; 2 photographs  
 Diagnosis: Boil-like lesion containing protozoan parasites; myxosporidia suspected  
 Submitter: R. D. Schick
- RTLA 178. Discus fish, Symphysodon discus  
 Material: One gross specimen; 3 photographs  
 Diagnosis: Inflammation and necrosis in muscle due to mixed infection of bacteria and protozoa (microsporidia suspected)  
 Submitter: R. D. Schick
- RTLA 179. Iguana iguana  
 Material: One gross autopsy specimen; 5 photographs including x-ray; 2 slides  
 Diagnosis: Osteodystrophy  
 Submitter: R. B. Northway
- RTLA 180. Corn earworm, Heliothis zea  
 Material: Five 35 mm slides of histology sections from various organs  
 Diagnosis: Infection with nuclear polyhedrosis virus of Trichoplusia ni  
 Submitter: G. E. Cantwell
- RTLA 181. Cabbage looper, Trichoplusia ni  
 Material: Six 35 mm slides of histology sections from various organs  
 Diagnosis: T. ni with 2 polyhedrosis viruses  
 Submitter: G. E. Cantwell
- RTLA 182. Zebra caterpillar, Ceramica picta  
 Material: Four 35 mm slides of histology sections from various organs  
 Diagnosis: Nuclear polyhedrosis infection  
 Submitter: G. E. Cantwell
- RTLA 183. Silkworm, Bombyx mori  
 Material: One 35 mm slide  
 Diagnosis: Cytoplasmic polyhedrosis virus  
 Submitter: G. E. Cantwell
- RTLA 184. Corn earworm, Heliothis zea  
 Material: One 35 mm slide  
 Diagnosis: Cytoplasmic virus of gut epithelium  
 Submitter: G. E. Cantwell

- RTLA 185. Saltmarsh caterpillar, Estigmene acrea  
 Material: One 35 mm slide  
 Diagnosis: Granulosis virus of fat body  
 Submitter: G. E. Cantwell
- RTLA 186. Fir-shoot roller, Choristoneura murinana  
 Material: One 35 mm slide  
 Diagnosis: Granulosis virus of fat body cells of fourth instar larva  
 Submitter: G. E. Cantwell
- RTLA 187. Cockchafer, Melelontha sp.  
 Material: One 35 mm slide  
 Diagnosis: Nosema disease  
 Submitter: G. E. Cantwell
- RTLA 188. Larch sawfly, Pristiphora erichsonii  
 Material: Two 35 mm slides  
 Diagnosis: Bacillus cereus penetrating the gut in the vicinity of point of attachment of hindgut to posterior portion of midgut  
 Submitter: G. E. Cantwell
- RTLA 189. European cockchafer, Melelontha sp.  
 Material: One 35 mm slide  
 Diagnosis: Spores of Bacillus popilliae in the blood  
 Submitter: G. E. Cantwell
- RTLA 190. Silkworm, Bombyx mori  
 Material: Two 35 mm slides  
 Diagnosis: Effects of crystals of B. thuringiensis on gut 15 minutes after feeding and change in the midgut 55 minutes after crystal ingestion  
 Submitter: G. E. Cantwell
- RTLA 191. Crane fly, Tipula paludosa  
 Material: One 35 mm slide  
 Diagnosis: Fat body cells of larva infected with Rickettsiella tipulae  
 Submitter: G. E. Cantwell
- RTLA 192. Mediterranean flour moth, Anagasta kuehniella  
 Material: One 35 mm slide  
 Diagnosis: Section of A. kuehniella two days after infection by B. cereus  
 Submitter: G. E. Cantwell
- RTLA 193. Rhinoceros beetle, Oryctes rhinoceros  
 Material: One 35 mm slide  
 Diagnosis: Beauveria tenella infection  
 Submitter: G. E. Cantwell
- RTLA 194. Oryctes nasicornis  
 Material: One 35 mm slide  
 Diagnosis: Beauveria tenella infection  
 Submitter: G. E. Cantwell



- RTLA 195. Rhinoceros beetle, Oryctes rhinoceros  
 Material: One 35 mm slide  
 Diagnosis: Metarrhizium anisopliae infection  
 Submitter: G. E. Cantwell
- RTLA 196. Larch sawfly, Pristiphora erichsonii  
 Material: One 35 mm slide  
 Diagnosis: Normal larch sawfly  
 Submitter: G. E. Cantwell
- RTLA 197. Coho salmon, Oncorhynchus kisutch  
 Material: One gross specimen; photographs; 3 slides  
 Diagnosis: Fibrolipoma  
 Submitter: L. N. Allison
- RTLA 198. Drosophila melanogaster  
 Material: Eleven slides  
 Diagnosis: Five slides -- st tubw adults  
 Three slides -- plus wild type adults  
 Three slides -- larval cross sections  
 Submitter: J. H. Sang  
 Reprint: Sang, James H. Biochemical Basis of Hereditary Melanotic Tumors in Drosophila. Natl. Cancer Inst. Monogr. 31: 291-301. 1969.
- RTLA 199. Guppy, Poecilia reticulata  
 Material: Three whole specimens  
 Diagnosis: Teratoid anomalies  
 Submitter: R. Wenk
- RTLA 200. Giant toad, Bufo marinus  
 Material: One live toad  
 Diagnosis: Lymphatic cyst on top of head  
 Submitter: C. Gans
- RTLA 201. Red-eared turtle, Chrysemys scripta elegans  
 Material: One live turtle  
 Diagnosis: Epidermoid cyst under left eye with bacterial infection  
 Submitter: W. Frair
- RTLA 202. Sockeye salmon, Oncorhynchus nerka  
 Material: One adult salmon  
 Diagnosis: Fibroma  
 Submitter: N. Boyce
- RTLA 203. Coho salmon, Oncorhynchus kisutch  
 Material: One adult coho salmon; 3 photographs  
 Diagnosis: Lymphosarcoma  
 Submitter: N. Boyce
- RTLA 204. Mummichog, Fundulus heteroclitus  
 Material: Six slides  
 Diagnosis: Fibroma  
 Submitter: P. P. Yevich

- RTLA 205. American bullfrog, Rana catesbeiana  
Material: One slide  
Diagnosis: Acute and chronic inflammation associated with bacterial colonies involving liver and muscle  
Submitter: E. L. Cooper and B. S. Baculi
- RTLA 206. Western toad, Bufo boreas  
Material: One slide  
Diagnosis: Fibroma  
Submitter: E. L. Cooper and B. S. Baculi
- RTLA 207. Frog, Rana montezumae  
Material: One slide  
Diagnosis: Splenic infarcts  
Submitter: E. L. Cooper and B. S. Baculi
- RTLA 208. Shrimp, Palaemon sp.  
Material: One shrimp  
Diagnosis: Parasitized by an isopod, Bopyrus sp.  
Material: G. O'Coner
- RTLA 209. Edible shrimp, Penaeus aztecus  
Material: Nine gross specimens; 5 normal controls  
Diagnosis: Inflammation, repair and regeneration  
Submitter: R. A. Neal
- RTLA 210. Shrimp, Penaeus setiferus  
Material: Nine gross specimens; 5 normal controls  
Diagnosis: Inflammation, repair and regeneration  
Submitter: R. A. Neal
- RTLA 211. Praying mantis  
Material: Wet tissue; 10 slides  
Diagnosis: Granulomas  
Submitter: G. E. Cosgrove
- RTLA 212. Bull shark, Carcharhinus leucas  
Material: Gross specimen; 20 slides  
Diagnosis: Fibroma  
Submitter: M. Walker, G. Zubrod, and P. W. Gilbert
- RTLA 213. Longnose sucker, Catostomus catostomus  
Material: Three whole fish  
Diagnosis: Normal  
Submitter: R. W. Hinz
- RTLA 214. Firebellied newt, Cynops pyrrhogaster  
Material: Six slides; 1 photograph  
Diagnosis: Nephroblastoma  
Submitter: P. Zwart  
Reprint: Zwart, P. A Nephroblastoma in a Fire-bellied Newt, Cynops pyrrhogaster. Cancer Res., 30: 2691-2694. 1970.

- RTLA 215. Pacific oyster, Crassostrea gigas  
 Material: Ten slides; 4 blocks  
 Diagnosis: Probable epithelioma of the mantle with conchiolin formation  
 Submitter: G. B. Pauley and C. S. Sayce  
 Reprint: Pauley, Gilbert B. and Clyde S. Sayce. An Invasive Epithelial Neoplasm in a Pacific Oyster, Crassostrea gigas. J. Natl. Cancer Inst., 49(3): 897-902. 1972.
- RTLA 216. Brook trout, Salvelinus fontinalis  
 Material: Two slides  
 Diagnosis: Lymphosarcoma  
 Submitter: C. E. Dunbar  
 Reprint: Dunbar, Clarence E. Lymphosarcoma of Possible Thymic Origin in Salmonid Fishes. Natl. Cancer Inst. Monogr. 31: 167-171. 1969.
- RTLA 217. Rainbow trout, Salmo gairdneri  
 Material: One slide  
 Diagnosis: Nephroblastoma  
 Submitter: C. E. Dunbar  
 Reprint: [see RTLA 62]
- RTLA 218. Croaker  
 Material: Gross specimen; 3 photographs  
 Diagnosis: Exostosis versus osteoma  
 Submitter: J. P. Summerour
- RTLA 219. Gudgeon, Gobio gobio  
 Material: Five slides; one 35 mm slide  
 Diagnosis: Squamous cell carcinoma  
 Submitter: L. E. Mawdesley-Thomas  
 Reprint: Mawdesley-Thomas, Lionel E. and David Bucke. Squamous Cell Carcinoma in a Gudgeon (Gobio gobio, L.). Pathol. Vet., 4: 484-489. 1967.
- RTLA 220. Bream, Abramis brama  
 Material: Four slides; two 35 mm slides  
 Diagnosis: Lipoma  
 Submitter: L. E. Mawdesley-Thomas  
 Reprint: Mawdesley-Thomas, Lionel E. and D. Bucke. A Lipoma in a Bream (Abramis brama L.) Vet. Rec., 82: 673-674. 1968.
- RTLA 221. Roach, Rutilus rutilus  
 Material: Four slides  
 Diagnosis: Fish pox  
 Submitter: L. E. Mawdesley-Thomas  
 Reprint: Mawdesley-Thomas, Lionel E. and David Bucke. Fish Pox in the Roach (Rutilus rutilus L.). Vet. Rec., 81(2): 56-57. 1967.
- RTLA 222. Mummichog, Fundulus heteroclitus  
 Material: Four slides and blocks  
 Diagnosis: Granulomas  
 Submitter: P. P. Yevich

- RTLA 223. Sydney rock oyster, Crassostrea commercialis  
 Material: Two photographs; 6 slides  
 Diagnosis: Papilloma of mantle  
 Submitter: P. H. Wolf  
 Reprint: Wolf, Peter H. Unusually Large Tumor in a Sydney Rock Oyster. J. Natl. Cancer Inst., 46(5): 1079-1084. 1971.
- RTLA 224. American oyster, Crassostrea virginica  
 Material: Thirteen slides  
 Diagnosis: Hematopoietic neoplasms  
 Submitter: C. A. Farley  
 Reprint: Farley, C. Austin. Probable Neoplastic Disease of the Hematopoietic System in Oysters, Crassostrea virginica and Crassostrea gigas. Natl. Cancer Inst. Monogr. 31: 541-555. 1969.
- RTLA 225. Pacific oyster, Crassostrea gigas  
 Material: Three slides  
 Diagnosis: Hematopoietic neoplasms  
 Submitter: C. A. Farley  
 Reprint: [see RTLA 224]
- RTLA 226. Broad-banded copperhead, Agkistrodon contortrix laticinctus  
 Material: One piece of lung tissue; 3 photographs  
 Diagnosis: Excessive mucus and sloughing in bronchus with gram positive bacterial infection; satisfactory cause of death not determined  
 Submitter: W. E. Haast
- RTLA 227. Odonata (dragonfly) naiads  
 Material: Four specimens  
 Diagnosis: Subcutaneous lithiasis; etiology unknown  
 Submitter: H. R. Hepburn
- RTLA 228. Atlantic eel, Anguilla vulgaris  
 Material: Gross specimens; 10 slides; photographs  
 Diagnosis: Epithelial papillomas  
 Submitter: B. F. Deys  
 Reprint: Deys, B. F. Papillomas in the Atlantic Eel, Anguilla vulgaris. Natl. Cancer Inst. Monogr. 31: 187-193. 1969.
- RTLA 229. Drosophila melanogaster  
 Material: A live strain  
 Diagnosis:  $tuB_3$   
 Submitter: C. Barigozzi  
 Reprint: Barigozzi, C. Genetic Control of Melanotic Tumors in Drosophila. Natl. Cancer Inst. Monogr. 31: 277-290. 1969.
- RTLA 230. Blacktail platy, Xiphophorus sp., probably a hybrid between X. maculatus and X. helleri  
 Material: Twenty gross specimens; photographs  
 Diagnosis: Melanoma with invasion of underlying muscle  
 Submitter: I. L. Gorman

- RTLA 231. Indigo snake, Drymarchon corais couperi  
 Material: One piece of tissue; photographs  
 Diagnosis: Granuloma with totally necrotic center  
 Submitter: Unknown
- RTLA 232. Red-spotted newt, Notophthalmus viridescens  
 Material: Two slides; blocks  
 Diagnosis: Nematode parasite in pancreas  
 Submitter: G. E. Cosgrove
- RTLA 233. Hellbender, Cryptobranchus alleganiensis  
 Material: One slide; two 35 mm slides; 1 piece of wet tissue  
 Diagnosis: Adenoma of seminiferous epithelium  
 Submitter: G. E. Cosgrove  
 Reprint: Cosgrove, G. E. and J. C. Harshbarger. Testicular Tumor in a Salamander. J. Am. Vet. Med. Assoc., 159(5): 582. 1971.
- RTLA 234. Iguana iguana  
 Material: Three 35 mm slides; blocks; 1 slide  
 Diagnosis: Chronic abscess of the subcutaneous tissue of the left mandibular area; culture of abscess contents positive for Klebsiella sp.  
 Submitter: G. E. Cosgrove
- RTLA 235. Blue mussel, Mytilus edulis  
 Material: Three slides  
 Diagnosis: Lymphoma  
 Submitter: C. A. Farley  
 Reprint: Farley, C. Austin. Sarcomatoid Proliferative Disease in a Wild Population of Blue Mussels (Mytilus edulis). J. Natl. Cancer Inst., 43(2): 509-516. 1969.
- RTLA 236. Slatepencil urchin, Heterocentrotus mamillatus  
 Material: Sea-urchin spine with appendage  
 Diagnosis: Developmental anomaly  
 Submitter: A. C. Smith
- RTLA 237. Sea hare, Aplysia californica  
 Material: One gross specimen  
 Diagnosis: Granuloma -- caused by a fungus  
 Submitter: D. O. Carpenter
- RTLA 238. Claw-footed toad, Xenopus laevis  
 Material: Two gross kidney specimens  
 Diagnosis: (1) Gastro-pancreatic carcinoma  
 (2) Kidney carcinoma plus tubercles containing acid-fast bacteria  
 Submitter: E. Elkan  
 Reprint: Elkan, E. A Spontaneous Anaplastic Intestinal Metastasising Carcinoma in a South African Clawed Toad (Xenopus laevis Daudin). J. Pathol. Bacteriol., 100(3): 205-207. 1970.

- RTLA 239. Caecilian, Caecilia tentaculata  
Material: Gross specimen of soft tissue under tongue  
Diagnosis: Normal  
Submitter: E. H. Taylor
- RTLA 240. Half-toed gecko, Hemidactylus frenatus  
Material: One gross specimen; photographs  
Diagnosis: Infectious granuloma with necrotic center containing bacteria  
Submitter: R. G. Tuck, Jr.
- RTLA 241. American shad, Alosa sapidissima  
Material: Four slides; 2 photographs  
Diagnosis: Chronic inflammatory reaction, repair and scarring at the site of an old wound  
Submitter: R. W. Warner  
Reprint: Warner, Ronald W. and Stanley C. Katkansky. An Inflammatory Lesion in an American Shad, Alosa sapidissima. J. Fish. Res. Board Can., 27(1): 191-193. 1970.
- RTLA 242. Sockeye salmon, Oncorhynchus nerka  
Material: One adult salmon  
Diagnosis: Rhabdomyosarcoma  
Submitter: N. Boyce
- RTLA 243. Blue crab, Callinectes sapidus  
Material: One right chela  
Diagnosis: Cuticular cyst at joint of claw  
Submitter: J. A. Couch
- RTLA 244. Freshwater clam, Strophitus undulatus  
Material: One clam  
Diagnosis: Glocchidia  
Submitter: W. Lener
- RTLA 245. Planarian, Dactyligera muscula  
Material: Six gross specimens  
Diagnosis: Anomalous regeneration; etiology unknown  
Submitter: R. Kenk
- RTLA 246. Malayan pit viper, Caloselasma rhodostoma  
Material: Two slides  
Diagnosis: Oral sepsis; phlegmonous cellulitis  
Submitter: E. Elkan
- RTLA 247. Guppy, Poecilia reticulata  
Material: Gross specimens  
Diagnosis: Multiple granulomas of liver; possible degeneration of spinal cord  
Submitter: R. Wenk
- RTLA 248. Chinook salmon, Oncorhynchus tshawytscha  
Material: Head of one fish  
Diagnosis: Fibroameloblastoma  
Submitter: J. H. Wales

- RTLA 249. Drosophila melanogaster, tu(83.9)bw strain  
 Material: Gross specimens; slides; photographs  
 Diagnosis: (1) Normal  
 (2) Melanotic tumors  
 Submitter: J. H. Sang  
 Reprint: Sang, James H. Biochemical Basis of Hereditary Melanotic  
 Tumors in Drosophila. Natl. Cancer Inst. Monogr. 31:  
 291-301. 1969.
- RTLA 250. Earthworm, Lumbricus sp.  
 Material: Gross specimens  
 Diagnosis: Granulomatous reaction to parasite (nematode suspected)  
 Submitter: E. Holland
- RTLA 251. Photuris sp.  
 Material: Eleven gross specimens  
 Diagnosis: Incomplete; variety of teratologies, parasitic and microbial  
 infections  
 Submitter: M. McLean
- RTLA 252. Earthworm, Lumbricus sp.  
 Material: One gross specimen  
 Diagnosis: Hyperplasia and displasia of clitellar epithelium in  
 response to nematode parasite  
 Submitter: E. Holland
- RTLA 253. Darkblotched rockfish, Sebastes crameri  
 Material: One slide; 2 lantern slides  
 Diagnosis: Follicular and papillary carcinoma of the thyroid  
 Submitter: M. Katz
- RTLA 254. Lingcod, Ophiodon elongatus  
 Material: One slide; 2 lantern slides  
 Diagnosis: Lymphocystis  
 Submitter: M. Katz
- RTLA 255. Herring  
 Material: One slide  
 Diagnosis: Hydatiform cysts of cyclophyllid tapeworms  
 Submitter: M. Katz
- RTLA 256. Sucker, Deltistes sp.  
 Material: Three slides  
 Diagnosis: Subcutaneous fibroma  
 Submitter: M. Katz
- RTLA 257. Bloater, Coregonus hoyi  
 Material: One gross specimen  
 Diagnosis: Olfactory neuroepithelioma  
 Submitter: L. N. Allison
- RTLA 258. Coho salmon, Oncorhynchus kisutch  
 Material: One slide; 2 lantern slides  
 Diagnosis: Neurofibroma  
 Submitter: M. Katz

- RTLA 259. Chinook salmon, Oncorhynchus tshawytscha  
 Material: Photographs  
 Diagnosis: Fibroameloblastomas  
 Submitter: M. Katz  
 Reprint: Schlumberger, Hans G. and Max Katz. Odontogenic Tumors of Salmon, Cancer Res., 16(4): 369-370. 1956.
- RTLA 260. Fish  
 Material: Three photographs; one gross specimen  
 Diagnosis: Fibroma  
 Submitter: M. Katz
- RTLA 261. Coho salmon, Oncorhynchus kisutch  
 Material: One x-ray of jaw  
 Diagnosis: Ossifying fibroma or osteogenic sarcoma  
 Submitter: M. Katz
- RTLA 262. Earthworm, Lumbricus sp.  
 Material: One gross specimen  
 Diagnosis: Nematode infection  
 Submitter: E. Holland
- RTLA 263. Caecilian, Caecilia tentaculata  
 Material: Two vials of tissue  
 Diagnosis: Hemangioma  
 Submitter: E. H. Taylor
- RTLA 264. Dover sole, Microstomus pacificus  
 Material: Two whole specimens and tissue from another specimen  
 Diagnosis: Epidermal papilloma with chronic sub-epithelial inflammatory reaction  
 Submitter: J. S. Laurie
- RTLA 265. Ratfish, Hydrolagus colliei  
 Material: Four claspers  
 Diagnosis: Inflammatory cells and fibrous tissue in response to fungal infection  
 Submitter: J. S. Laurie
- RTLA 266. Flying lizard, Draco  
 Material: One gross specimen  
 Diagnosis: Presumptive subdermal infectious granuloma  
 Submitter: S. Campden-Main
- RTLA 267. Cutthroat trout, Salmo clarki  
 Material: Three slides  
 Diagnosis: Leukemia  
 Submitter: C. E. Smith  
 Reprint: Smith, Charlie E. An Undifferentiated Hematopoietic Neoplasm with Histologic Manifestations of Leukemia in a Cutthroat Trout (Salmo clarki). J. Fish. Res. Board Can., 28(1): 112-113. 1971.



- RTLA 268. Coho salmon, Oncorhynchus kisutch  
 Material: Viscera  
 Diagnosis: Neurofibroma or neurilemmoma  
 Submitter: L. Margolis
- RTLA 269. Apple snail, Ampullarius australis  
 Material: One slide; 1 photograph  
 Diagnosis: Adenomatous neoplasm associated with an inflammatory reaction  
 Submitter: K. Krieg  
 Reprint: Krieg, K. Ampullarius australis d'Orbigny (Mollusca, Gastropoda) as Experimental Animal in Oncological Research. A Contribution to the Study of Cancerogenesis in Invertebrates. Neoplasma 19(1): 41-49. 1972.
- RTLA 270. Freshwater planarian, Planaria dactyligera musculosa  
 Material: Three gross specimens; 1 block containing 3 planarians  
 Diagnosis: Anomalous regeneration; etiology unknown  
 Submitter: R. Kenk
- RTLA 271. South American red-eared turtle, Chrysemys scripta callirostris (one specimen; Common red-eared turtle, Chrysemys scripta elegans (2 specimens)  
 Material: Three live specimens  
 Diagnosis: Dermatitis  
 Submitter: A. Graves
- RTLA 272. Red-spotted newt, Notophthalmus viridescens  
 Material: One gross specimen; 2 photographs  
 Diagnosis: Muscle disintegration due to nerve injury or mesenchymal cell neoplasm  
 Submitter: E. R. Burns  
 Reprint: Burns, E. Robert and Harold J. White. A Spontaneous Mesenchymal Cell Neoplasm in the Adult Newt, Diemictylus viridescens. Cancer Res., 31: 826-829. 1971.
- RTLA 273. Bloater, Coregonus hoyi  
 Material: Three gross specimens  
 Diagnosis: Myxomatous lesion induced by unidentified organism  
 Submitter: L. N. Allison
- RTLA 274. Praying mantis  
 Material: Four slides; 2 gross specimens  
 Diagnosis: Black areas on cuticle  
 Submitter: G. E. Cosgrove
- RTLA 275. Timber rattlesnake, Crotalus horridus horridus  
 Material: Two slides; blocks  
 Diagnosis: (1) Spleen: reticuloendothelial hyperplasia  
 (2) Intestines: acute ulcerative enteritis  
 (3) Wall of stomach and intestines: granuloma (parasitic); one contains larval cestode; one contains nematode  
 Submitter: G. E. Cosgrove

- RTLA 276. Guppy (blue delta strain), Poecilia reticulata  
Material: Thirteen gross specimens; 23 slides  
Diagnosis: Acute bacterial infection with multiple granulomas  
in the mesentary and pancreatic tissue  
Submitter: J. G. Bennett
- RTLA 277. Channel catfish, Ictalurus punctatus  
Material: Two whole fish  
Diagnosis: Multiple encysted larvae of tapeworms (Cestoda),  
probably of genus Proteocephalus involving visceral  
serosal surface  
Submitter: W. W. Tullner
- RTLA 278. Leopard frog, Rana pipiens  
Material: Two slides of spleen  
Diagnosis: Infectious granuloma  
Submitter: D. J. Olson and E. L. Cooper
- RTLA 279. Leopard frog, Rana pipiens  
Material: Two slides of tissue with parasitic lesions  
Diagnosis: Granulomatous reaction to trematode parasites  
Submitter: D. J. Olson and E. L. Cooper
- RTLA 280. Crayfish, Orconectes rusticus  
Material: Six slides of crayfish antennal gland  
Diagnosis: Uric acid crystals  
Submitter: J. Hubschman
- RTLA 281. Brown bullhead, Ictalurus nebulosus  
Material: One gross specimen  
Diagnosis: Inflammatory lesion  
Submitter: G. G. Combs
- RTLA 282. Leopard frog, Rana pipiens  
Material: Six slides and photographs  
Diagnosis: Lucké renal adenocarcinoma  
Submitter: C. Snell
- RTLA 283. Coho salmon, Oncorhynchus kisutch  
Material: One complete fish head  
Diagnosis: Tissue too autolyzed for diagnosis  
Submitter: L. N. Allison
- RTLA 284. Coho salmon, Oncorhynchus kisutch  
Material: Gills  
Diagnosis: Thyroid tumor undergoing massive necrosis  
Submitter: L. N. Allison
- RTLA 285. Mosquito, Anopheles annulipes  
Material: Three whole specimens; 8 slides  
Diagnosis: Infection of salivary gland by Pseudomonas bacteria  
Submitter: J. D. Briggs

- RTLA 286. Coho salmon, Oncorhynchus kisutch  
 Material: A tumor from a adult female  
 Diagnosis: Fibroma  
 Submitter: D. G. MacLean
- RTLA 287. Earthworm, Lumbricus sp.  
 Material: One worm  
 Diagnosis: Bacterial infection with an encapsulating granuloma reaction  
 Submitter: H. L. Zimmack
- RTLA 288. Brown bullhead, Ictalurus nebulosus  
 Material: One whole fish  
 Diagnosis: Epithelial carcinoma; granulomas in the liver  
 Submitter: G. G. Combs
- RTLA 289. Brown bullhead, Ictalurus nebulosus  
 Material: One fish head  
 Diagnosis: Epidermal papilloma  
 Submitter: G. G. Combs
- RTLA 290. Yellow bullhead, Ictalurus natalis  
 Material: One fish head and viscera  
 Diagnosis: Injury and wound repair  
 Submitter: G. G. Combs
- RTLA 291. Sail lizard, Hydrosaurus amboinensis  
 Material: Eighteen slides  
 Diagnosis: Leucocyte infiltrations in liver, kidneys, lungs, heart and spleen; leukemia  
 Submitter: P. Zwart  
 Reprint: Zwart, P. and J. C. Harshbarger. Hematopoietic Neoplasms in Lizards: Report of a Typical Case in Hydrosaurus amboinensis and of a Probable Case in Varanus salvator. Int. J. Cancer, 9: 548-553. 1972.
- RTLA 292. Striped bass, Morone saxatilis  
 Material: One piece of tissue; 24 slides  
 Diagnosis: Nephroblastoma  
 Submitter: C. F. Helmboldt  
 Reprint: Helmboldt, C. F. and D. S. Wyand. Nephroblastoma in a Striped Bass. J. Wildl. Dis., 7: 162-165. 1971.
- RTLA 293. Spiny-headed worm, Macracanthorhynchus hirudinaceus  
 Material: One worm  
 Diagnosis: Bacterial infection of damaged cuticle  
 Submitter: J. T. DeBell
- RTLA 294. Surf clam, Spisula solidissima  
 Material: One clam  
 Diagnosis: Neuroma, neurofibroma, or fibroma  
 Submitter: W. Smith

- RTLA 295. Pacific hagfish, Eptatretus stouti  
Material: Ten slides  
Diagnosis: Leucocyte infiltration in response to a fungal infection  
Submitter: D. S. Linthicum
- RTLA 296. Rainbow trout, Salmo gairdneri  
Material: Four slides  
Diagnosis: Hepatoma  
Submitter: L. M. Ashley  
Reprint: Ashley, Laurence M. Pathology of Fish Fed Aflatoxins and Other Antimetabolites. In: A Symposium on Diseases of Fishes and Shellfishes, Stanislas F. Snieszko (ed.), pp. 366-379. (American Fisheries Society, Special Publication No. 5, Washington 1970).
- RTLA 297. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Hepatoma  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 298. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Hepatoma  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 299. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Proliferation of bile duct and tubules  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 300. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Diffuse necrosis  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 301. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Proliferation of bile duct  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 302. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Acidophilic nodules  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 303. Brook trout, Salvelinus fontinalis  
Material: Three slides  
Diagnosis: Myxoma and granuloma  
Submitter: L. M. Ashley

- RTLA 304. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Nephroblastoma  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 305. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Reticulocytoma  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 306. Rainbow trout, Salmo gairdneri  
Material: Three slides  
Diagnosis: Normal stomach and intestine with trophozoite stages  
of Entameba salmonis  
Submitter: L. M. Ashley
- RTLA 307. Rainbow trout, Salmo gairdneri  
Material: Two slides  
Diagnosis: Reticulocytoma (?)  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 308. Rainbow trout, Salmo gairdneri  
Material: Two slides  
Diagnosis: Advanced hepatoma with spread to caeca and pyloric  
stomach  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 309. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Reticulocytoma  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 310. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Hepatoma with cystic cholangitis and inflammation  
of liver  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 311. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Adenocarcinoma  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 312. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Hepatoma  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]

- RTLA 313. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Adenocarcinoma  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 314. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Nephroblastoma  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 315. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Nephroblastoma  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 316. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Incipient hepatoma  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 317. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Hepatoma  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 318. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Hepatoma  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 319. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Hepatoma  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 320. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Hepatitis with necrosis and hyperemia  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 321. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Hepatoma  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]

- RTLA 322. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Incipient hepatoma  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 323. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Hepatoma  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 324. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Incipient hepatoma  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 325. Rainbow trout, Salmo gairdneri  
Material: One slide  
Diagnosis: Nephroblastoma  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 326. Rainbow trout, Salmo gairdneri  
Material: Two slides  
Diagnosis: Nephroblastoma  
Submitter: L. M. Ashley  
Reprint: [see RTLA 296]
- RTLA 327. Dwarf clawed frog, Hymenochirus boettgeri  
Material: Seven live frogs  
Diagnosis: Developmental anomalies  
Submitter: R. Wenk
- RTLA 328. Brown bullhead, Ictalurus nebulosus  
Material: Gross specimen with oral papillary growth  
Diagnosis: Epidermal papilloma; granulomas in liver  
Submitter: G. G. Combs
- RTLA 329. Hooked mussel, Brachidontes recurvus  
Material: Two gross specimens with mantle lesions  
Diagnosis: Dermal granuloma  
Submitter: A. C. Smith  
Reprint: Smith, Albert C. and Ronald L. Taylor. Preliminary Results of Marine Pathology Study Off the Florida Coast. Mar. Technol. Soc. J., 6(3): 51-52. 1972.
- RTLA 330. Fish  
Material: Cleithrum with growth  
Diagnosis: Osteophyte  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]

- RTLA 331. Sheepshead, Archosargus probatocephalus  
Material: Enlarged ovaries  
Diagnosis: Multiple granulomas  
Submitter: A. C. Smith
- RTLA 332. Sugar trout  
Material: Viscera showing nodules on esophagus and stomach  
Diagnosis: Multiple granulomas in response to gram negative rod-shaped bacteria  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]
- RTLA 333. Sheepshead, Archosargus probatocephalus  
Material: Caudal fins with maculae  
Diagnosis: Lymphocystis  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]
- RTLA 334. Sheepshead, Archosargus probatocephalus  
Material: Liver with darkly colored wound  
Diagnosis: Hemorrhage  
Submitter: A. C. Smith
- RTLA 335. Rock (stone?) crab  
Material: Cephalothorax with white mottling.  
Diagnosis: Externally infested with protozoa  
Submitter: A. C. Smith
- RTLA 336. Horseshoe crab, Limulus polyphemus  
Material: Gross specimen with cuticular wound near left eye  
Diagnosis: Indeterminant  
Submitter: A. C. Smith
- RTLA 337. Sea squirt  
Material: Tunicate with barnacles attached  
Diagnosis: Thinning or atrophy and condensation of the tunic at the juncture with the barnacles  
Submitter: A. C. Smith
- RTLA 338. Spotted eel  
Material: Two pieces of body wall with dark (hemorrhagic) lesions  
Diagnosis: Granuloma  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]
- RTLA 339. Crab  
Material: Gross specimen with soft white area on right carapace  
Diagnosis: External surface infected with protozoa and bacteria  
Submitter: A. C. Smith
- RTLA 340. Amphioxus, Branchiostoma caribaeum  
Material: Gross specimen with darkened ventral depression near head  
Diagnosis: Ulcerated area  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]



- RTLA 341. Sand dollar, Dendraster eccentricus  
Material: Portion of animal with wound  
Diagnosis: Pending  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]
- RTLA 342. Goby  
Material: Gross specimen with swelling around the vent  
Diagnosis: Rectal fistula with prolapse of anal mucosa and herniation of pancreas  
Submitter: A. C. Smith
- RTLA 343. Pinfish, Lagodon rhomboides  
Material: Two gross specimens with elevated white lesions on the head  
Diagnosis: Parasitic cyst and inflammation  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]
- RTLA 344. Sea hare, Aplysia dactylomela  
Material: Two pieces of parapodia with white lesions  
Diagnosis: No significant histologic abnormality  
Submitter: A. C. Smith
- RTLA 345. Starfish, Astropecten (?) sp.  
Material: One gross specimen with asymmetrical color pattern  
Diagnosis: No significant histologic abnormality  
Submitter: A. C. Smith
- RTLA 346. Colonial tunicate with sponge  
Material: Gross specimen with darkening of tunic at point of attachment with sponge  
Diagnosis: Tunic has collections of excretory microphages  
Submitter: A. C. Smith
- RTLA 347. Sponge  
Material: Two pieces with coarse gray mottling  
Diagnosis: No significant histologic abnormality  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]
- RTLA 348. Sponge  
Material: Two species of sponges growing together; interface surface is thinner and lighter than unshared surface  
Diagnosis: Pending  
Submitter: A. C. Smith
- RTLA 349. Fiddler crab, Uca pugilator  
Material: Gross specimen with black protrusion on third left walking leg  
Diagnosis: Brown pigmentation of cuticle; probably resulting from previous injury  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]

- RTLA 350. Fiddler crab, Uca pugilator  
Material: Three gross specimens with darkened areas on ventral cuticle  
Diagnosis: Thickened cuticular laminae; no explanation  
Submitter: A. C. Smith
- RTLA 351. Turtle (Green sea?) Chelonia mydas (?)  
Material: Two enlarged lymph pumps  
Diagnosis: No significant histologic abnormality  
Submitter: A. C. Smith
- RTLA 352. Hermit crab, Pagurus sp.  
Material: Gross specimen with abdominal swellings  
Diagnosis: Thickened irregular focus in exoskeleton  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]
- RTLA 353. Pen shell  
Material: Two pieces of mantle with black shiny growths  
Diagnosis: Pearl forming cyst on mantle  
Submitter: A. C. Smith
- RTLA 354. Worm, Nereis (?) sp.  
Material: Gross specimen with abrupt change in pigmentation  
Diagnosis: Normal testis  
Submitter: A. C. Smith
- RTLA 355. Sea hare, Aplysia sp.  
Material: Gross specimen with wound in parapodium  
Diagnosis: Bacterial growth and necrosis under skin fold  
Submitter: A. C. Smith
- RTLA 356. Sea hare, Aplysia dactylomela  
Material: Piece of tissue with soft elevated growth  
Diagnosis: Developmental anomaly; all cells normal  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]
- RTLA 357. Sea hare, Aplysia sp.  
Material: Gross specimen with pale patches  
Diagnosis: Subepidermal edema  
Submitter: A. C. Smith
- RTLA 358. Sea hare, Aplysia dactylomela  
Material: Gross specimen with large growth on right parapodium  
Diagnosis: Developmental anomaly  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]
- RTLA 359. Sea anemone  
Material: Gross specimen with brown protrusions on column  
Diagnosis: Normal ova  
Submitter: A. C. Smith

## RTLA 360. Jellyfish

Material: Piece of tissue from bell containing dark bodies  
Diagnosis: No histological lesion; gross diagnosis --  
          canicular system obstructed with sand  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]

## RTLA 361. Starfish (9-rayed)

Material: Ray missing a dorsal spine  
Diagnosis: No histological lesion  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]

RTLA 362. Red grouper, Epinephelus morio

Material: Viscera showing parasites  
Diagnosis: Suspected parasites are impacted pyloric caeca  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]

RTLA 363. Red grouper, Epinephelus morio

Material: Viscera showing parasitic worms  
Diagnosis: Worms; unidentified  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]

RTLA 364. Black sea bass, Centropristis striata

Material: Gross specimen with soft swelling anterior to dorsal fin  
Diagnosis: Collection of proteinaceous edema believed to occur  
          normally with the seasonal development of the testis  
Submitter: A. C. Smith

RTLA 365. Sea hare, Aplysia dactylomela

Material: Gross specimen with an adhesion  
Diagnosis: Developmental anomaly of parapodium  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]

RTLA 366. Red grouper, Epinephelus morio

Material: Five pieces of liver with darkened areas  
Diagnosis: Hemorrhage  
Submitter: A. C. Smith

## RTLA 367. Jellyfish

Material: Pieces of bell showing abnormal wrinkling  
Diagnosis: Manifestation of dehydration  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]

RTLA 368. Sea hare, Aplysia dactylomela

Material: Piece of parapodium with deep crypts  
Diagnosis: Crypts extra deep, but otherwise normal  
Submitter: A. C. Smith

- RTLA 369. Colonial tunicate  
Material: Piece of tissue containing dark body  
Diagnosis: Parasite infection  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]
- RTLA 370. Horseshoe crab, Limulus polyphemus  
Material: Gross specimen with dark brown lesions on spine  
Diagnosis: Pending  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]
- RTLA 371. Colonial tunicate  
Material: Two pieces of tissue (each from a different species of tunicate) containing foreign material  
Diagnosis: Parasite infection  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]
- RTLA 372. Colonial tunicate  
Material: Pieces of tissue from several animals containing foreign material  
Diagnosis: Sand suspected  
Submitter: A. C. Smith
- RTLA 373. Spanish mackerel, Scomberomorus maculatus  
Material: Pieces of body wall from several animals with copepod parasites  
Diagnosis: Acute inflammatory reaction with foreign body giant cells  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]
- RTLA 374. Spanish mackerel, Scomberomorus maculatus  
Material: Two pieces of body wall with wound  
Diagnosis: Acute inflammatory reaction similar to response seen at site of copepod attachment  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]
- RTLA 375. Spanish mackerel, Scomberomorus maculatus  
Material: Heads and body walls from several animals with multiple small protrusions  
Diagnosis: Cyst containing multiple spores of a parasite (coccidia)  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]
- RTLA 376. Sheephead, Archosargus probatocephalus  
Material: Gill with enlarged filament  
Diagnosis: Contains parasitic worms  
Submitter: A. C. Smith  
Reprint: [see RTLA 329]

- RTLA 377. Sheephead, Archosargus probatocephalus  
Material: Liver with dark region  
Diagnosis: Normal liver and pancreas containing hemosiderin deposits  
Submitter: A. C. Smith
- RTLA 378. Timber rattlesnake, Crotalus horridus horridus  
Material: Wet tissue  
Diagnosis: Lymphoblastic leukemia  
Submitter: L. A. Griner
- RTLA 379. Rhinoceros viper, Bitis nasicornis  
Material: Twelve slides  
Diagnosis: Lymphosarcoma  
Submitter: L. A. Griner
- RTLA 380. American bullfrog, Rana catesbeiana  
Material: Two slides of parathyroid glands  
Diagnosis: Huge cyst containing colloid-like substance  
Submitter: E. L. Cooper
- RTLA 381. Drosophila melanogaster  
Material: One slide  
Diagnosis: Non-invasive imaginal disk tumor  
Submitter: E. Gateff  
Reprint: Gateff, Elisabeth and Howard A. Schneiderman. Neoplasms in Mutant and Cultured Wild-Type Tissues of Drosophila. Natl. Cancer Inst. Monogr. 31: 365-397. 1969.
- RTLA 382. Drosophila melanogaster  
Material: One slide  
Diagnosis: Invasive; imaginal disks are abnormal in appearance and size  
Submitter: E. Gateff  
Reprint: [see RTLA 381]
- RTLA 383. Drosophila melanogaster  
Material: One slide  
Diagnosis: Invasive cells, ganglion mother cells, and neuroblast cells  
Submitter: E. Gateff  
Reprint: [see RTLA 381]
- RTLA 384. Brown bullhead, Ictalurus nebulosus  
Material: Fillet with external growths  
Diagnosis: Epidermal papilloma  
Submitter: G. G. Combs
- RTLA 385. Brown bullhead, Ictalurus nebulosus  
Material: One head - one cm growth in corner of upper lip  
Diagnosis: Epidermal papilloma  
Submitter: G. G. Combs

- RTLA 386. Yellow bullhead, Ictalurus natalis  
Material: Gross specimen with small protrusion near left pectoral fin  
Diagnosis: Epidermal (mucus cell) papilloma  
Submitter: G. G. Combs
- RTLA 387. Yellow bullhead, Ictalurus natalis  
Material: Gross specimen with multiple raised lesions on dorsal and ventral surface of head  
Diagnosis: Epidermal papilloma  
Submitter: G. G. Combs
- RTLA 388. Brown bullhead, Ictalurus nebulosus  
Material: Rear portion of fish with one cm growth on anal fin  
Diagnosis: Early lipoma  
Submitter: G. G. Combs
- RTLA 389. Brown bullhead, Ictalurus nebulosus  
Material: Rear portion of fish with two protrusions anterior to rear dorsal fin  
Diagnosis: Early lipoma  
Submitter: G. G. Combs
- RTLA 390. Yellow bullhead, Ictalurus natalis  
Material: Gross specimen with growth in left corner of mouth on lower lip  
Diagnosis: Fibrocartilage nodule; possibly caused by injury  
Submitter: G. G. Combs
- RTLA 391. Brown bullhead, Ictalurus nebulosus  
Material: Fish head with soft lesion in right corner of mouth on lower lip  
Diagnosis: Epidermal hyperplasia  
Submitter: G. G. Combs
- RTLA 392. Brown bullhead, Ictalurus nebulosus  
Material: Fish head with one cm growth in floor of mouth  
Diagnosis: Epidermal carcinoma  
Submitter: G. G. Combs
- RTLA 393. Brown bullhead, Ictalurus nebulosus  
Material: Fish head with small lesion on upper lip  
Diagnosis: Epidermal papilloma  
Submitter: G. G. Combs
- RTLA 394. Brown bullhead, Ictalurus nebulosus  
Material: Fish head with lesion inside mouth in upper left corner  
Diagnosis: Epithelial carcinoma  
Submitter: G. G. Combs
- RTLA 395. Brown bullhead, Ictalurus nebulosus  
Material: Fish head with lesion inside left corner of mouth  
Diagnosis: Epidermal papilloma  
Submitter: G. G. Combs

- RTLA 396. Brown bullhead, Ictalurus nebulosus  
Material: Fish tail with small lesion on right side  
Diagnosis: Fibrous hyperplasia adjacent to ulcerated area  
Submitter: G. G. Combs
- RTLA 397. Yellow bullhead, Ictalurus natalis  
Material: Fish midsection with slightly raised lateral lesion  
Diagnosis: Epidermal papilloma  
Submitter: G. G. Combs
- RTLA 398. Brown bullhead, Ictalurus nebulosus  
Material: Fish head with slightly raised dorsal lesion  
Diagnosis: Epidermal papilloma  
Submitter: G. G. Combs
- RTLA 399. Brown bullhead, Ictalurus nebulosus  
Material: Fish head and thorax with multiple slightly raised lesions  
Diagnosis: Epidermal papilloma  
Submitter: G. G. Combs
- RTLA 400. Frillfin goby, Bathygobius soporator  
Material: Gross specimen; growths on pectoral fin, jaw, and dorsum  
Diagnosis: Hyperplastic epidermis; no invasion  
Submitter: N. Rothman Feinberg
- RTLA 401. Warmouth, Lepomis gulosus  
Material: Gross specimen  
Diagnosis: Non-diagnostic  
Submitter: J. S. Laurie
- RTLA 402. Chain pickerel, Esox niger  
Material: Gross specimen  
Diagnosis: Non-diagnostic  
Submitter: J. S. Laurie
- RTLA 403. Pickerel and Leopard frog hybrid, Rana palustris x pipiens  
Material: Gross specimen with enlarged testis  
Diagnosis: Teratocarcinoma  
Submitter: J. D. Hardy, Jr.  
Reprint: Hardy, J. D., Jr. and J. Gillespie. Hybridization Between Rana pipiens and Rana palustris in a Modified Natural Environment. Chesapeake Sci. (in press).
- RTLA 404. White croaker, Genyonemus lineatus  
Material: Gross specimen with two oral growths  
Diagnosis: Epidermal papilloma  
Submitter: K. P. Lindstrom
- RTLA 405. White croaker, Genyonemus lineatus  
Material: Gross specimen with oral growth  
Diagnosis: Epidermal papilloma  
Submitter: K. P. Lindstrom

- RTLA 406. Yellow bullhead, Ictalurus natalis  
Material: Four slides and posterior portion of fish with dermal lesion  
Diagnosis: Cutaneous hemangioma or capillary hemangioma of the skin  
Submitter: C. J. Dawe and B. J. Sanders
- RTLA 407. Snail  
Material: Gross specimen with protuberance behind head  
Diagnosis: Developmental defect  
Submitter: J. C. Stinson
- RTLA 408. Leopard frog, Rana pipiens  
Material: Two slides  
Diagnosis: Hepatic necrosis  
Submitter: E. Elkan
- RTLA 409. Trinidad leaf frog, Phyllomedusa trinitatis  
Material: One slide  
Diagnosis: Renal mycosis  
Submitter: E. Elkan
- RTLA 410. White's tree frog, Hyla caerulea  
Material: One slide  
Diagnosis: Kidney showing multiple granulomas due to fungal infection; lesions contain numerous giant cells  
Submitter: E. Elkan
- RTLA 411. Nyctimystes kubori  
Material: One slide  
Diagnosis: Myxosporidiosis  
Submitter: E. Elkan
- RTLA 412. Nyctimystes daymanio  
Material: One slide  
Diagnosis: A cestode -- Myxobolus  
Submitter: E. Elkan
- RTLA 413. Flathead sole, Hippoglossoides elassodon  
Material: Gross specimen with growth on eyed-side  
Diagnosis: Epithelial papilloma; no invasion  
Submitter: J. S. Laurie
- RTLA 414. Clingfish, Sicyogaster maeandricus  
Material: Gross specimen with abnormal area behind head  
Diagnosis: Epidermal hyperplasia in response to parasitic ova  
Submitter: J. S. Laurie
- RTLA 415. Flathead sole, Hippoglossoides elassodon  
Material: Gross specimen with large growth on tail fin  
Diagnosis: Epidermal papilloma  
Submitter: J. S. Laurie



RTLA 416. Ratfish, Hydrolagus colliei

Material: Tissue from region of left pectoral fin with growth;  
2 slides

Diagnosis: Myxosarcoma

Submitter: J. S. Laurie

RTLA 417. Flathead sole, Hippoglossoides elassodon

Material: Gross specimen with growth on posterior part  
of dorsal fin

Diagnosis: Papilloma; angioepithelial nodule

Submitter: J. S. Laurie

RTLA 418. Square-marked toad, Bufo regularis

Material: Gross specimen with soft lump posterior to left eye

Diagnosis: Granuloma containing very small gram positive rod-  
shaped bacteria

Submitter: R. Crombie

RTLA 419. Dwarf-clawed frog, Hymenochirus boettgeri

Material: Twelve gross specimens with supernumerary legs

Diagnosis: Developmental anomalies

Submitter: R. Wenk

RTLA 420. Dwarf-clawed frog, Hymenochirus boettgeri

Material: Gross specimen with growth on lip

Diagnosis: Inflammatory lesion containing acid-fast bacteria

Submitter: R. Wenk

RTLA 421. Quahog, Mercenaria mercenaria or Venus mercenaria

Material: Two bottles of tissue

Diagnosis: Normal tissue

Submitter: A. C. Schmeer

RTLA 422. Spot, Leiostomus xanthurus

Material: Gross specimen with tumor at base of dorsal fin

Diagnosis: Abnormal fat deposit possibly early lipoma

Submitter: D. E. Ritchie

RTLA 423. Chinook salmon, Oncorhynchus tshawytscha

Material: Fish head with large firm dorsal growth and a small  
soft growth inside operculum

Diagnosis: Large tumor -- fibrolipoma; small tumor -- parasitic  
lesion containing myxosporidia -- genus Henneguya

Submitter: J. H. Wales

RTLA 424. Tokay gecko, Gekko gecko

Material: Head with raised area behind left eye

Diagnosis: Granuloma in response to Actinomyces

Submitter: B. L. Burge

RTLA 425. English sole, Parophrys vetulus

Material: Gross specimen with multiple small lesions near fins

Diagnosis: Multiple granulomas adjacent to parasitic worms

Submitter: J. S. Laurie

- RTLA 426. Flathead sole, Hippoglossoides elassodon  
Material: Gross specimen with growth involving middle half of non-pigmented side  
Diagnosis: Epidermal papilloma  
Submitter: J. S. Laurie
- RTLA 427. Flathead sole, Hippoglossoides elassodon  
Material: Gross specimen with tumor on tail fin  
Diagnosis: Epidermal papilloma  
Submitter: J. S. Laurie
- RTLA 428. Western diamondback rattler, Crotalus atrox  
Material: Cyst-like growth from liver  
Diagnosis: Granuloma due to large gram-positive rod-shaped bacteria  
Submitter: J. T. Self
- RTLA 429. Western diamondback rattler, Crotalus atrox  
Material: Tissue -- growth from dorsal musculature  
Diagnosis: Mycotic granuloma  
Submitter: J. T. Self
- RTLA 430. Coho salmon, Oncorhynchus kisutch  
Material: Two pieces of tissue  
Diagnosis: Sarcoma of probable peripheral nerve sheath origin  
Submitter: G. R. Bell
- RTLA 431. Atlantic salmon, Salmo salar  
Material: Gross specimen with growth on gills  
Diagnosis: Probable thyroid carcinoma; autolysis too advanced for definitive diagnosis  
Submitter: J. W. Saunders
- RTLA 432. Pencilfish, Poecilobrycon harrisoni  
Material: Gross specimen with doughnut-shaped lesion around vent  
Diagnosis: Anal epithelioma  
Submitter: S. H. Weitzman
- RTLA 433. Goldfish, Carassius auratus  
Material: Gross specimen with multiple cuticular lesions  
Diagnosis: Schlumberger's neurilemmoma versus fibrosarcoma  
Submitter: B. M. Levy  
Reprint: Duncan, Thomas E. and James C. Harkin. Electron Microscopic Studies of Goldfish Tumors Previously Termed Neurofibromas and Schwannomas. Am. J. Pathol., 55(2): 191-202. 1969.
- RTLA 434. Goldfish, Carassius auratus  
Material: Gross specimen with multiple cuticular lesions  
Diagnosis: Schlumberger's neurilemmoma versus fibrosarcoma  
Submitter: B. M. Levy  
Reprint: [see RTLA 433]

- RTLA 435. Leopard frog, Rana pipiens  
 Material: Two slides  
 Diagnosis: Teratoma  
 Submitter: J. C. Streett  
 Reprint: Streett, J. Clark. A Note on a Teratoma Occurring in the Leopard Frog. Tex. J. Sci., 16(4): 493. 1964.
- RTLA 436. Staghorn coral, Acropora sp.  
 Material: Four specimens with large protuberances  
 Diagnosis: Reaction to trematode parasite suspected  
 Submitter: P. Glynn
- RTLA 437. Leech, Placobdella parasitica  
 Material: Four slides  
 Diagnosis: Non-neoplastic papillary lesion representing injury and repair; pigment cells represent histiocytes transporting something -- presumably waste.  
 Submitter: G. E. Cosgrove
- RTLA 438. Larva of Douglas-fir tussock moth, Hemerocampa pseudotsugata  
 Material: Gross specimen with supernumerary leg  
 Diagnosis: Developmental anomaly  
 Submitter: M. E. Martignoni
- RTLA 439. Corn snake, Elaphe guttata guttata  
 Material: One paraffin block  
 Diagnosis: Multiple granulomas in response to fungal infection  
 Submitter: E. Elkan
- RTLA 440. Coho salmon, Oncorhynchus kisutch  
 Material: Tissue from large caudal tumors  
 Diagnosis: Fibroma or fibrolipoma  
 Submitter: G. R. Bell
- RTLA 441. Tiger python, Python molurus  
 Material: One paraffin block  
 Diagnosis: Adenoameloblastoma  
 Submitter: H. Trebbin  
 Reprint: Kast, A. Malignes Adenoameloblastom des Gaumens bei einer Tigerpython. Frankfurt. Z. Pathol., 77: 135-140. 1967.
- RTLA 442. Starfish, Linckia multifora  
 Material: Two gross specimens with protuberance on rays  
 Diagnosis: Parasitized by gastropod mollusk  
 Submitter: A. C. Smith
- RTLA 443. A. Homo sapiens and B. Drosophila melanogaster  
 Material: Thirty-one paraffin blocks; 20 photographs; 3 lantern slides; 7 microscope slides (Dr. Mary B. Stark's material)  
 Diagnosis: (1) human gastric carcinoma; (2) lethal-7 Drosophila imaginal disk tumor; and (3) melanotic tumors of Drosophila  
 Submitter: L. Stark, J. Dahl, and D. Stark  
 Reprint: Stark, Mary B. The Origin of Certain Hereditary Tumors in Drosophila. Am. J. Cancer, 31(2): 253-267. 1937.

- RTLA 444. Bluefish, Pomatomus saltatrix  
Material: Four slides  
Diagnosis: Lymphangioendothelioma  
Submitter: G. Gardner and M. M. Barry
- RTLA 445. Longhorn sculpin, Myoxocephalus octodecemspinosus  
Material: One slide  
Diagnosis: Testis maturation arrest  
Submitter: G. Gardner and M. M. Barry
- RTLA 446. Longhorn sculpin, Myoxocephalus octodecemspinosus  
Material: Four slides  
Diagnosis: Teratocarcinoma-cystadenoma in the kidney  
Submitter: G. Gardner and M. M. Barry
- RTLA 447. Earthworm  
Material: One slide  
Diagnosis: Parasitic lesion; sporozoan suspected  
Submitter: D. R. Helland
- RTLA 448. Red-spotted newt, Notophthalmus viridescens  
Material: Four slides  
Diagnosis: Multiple granulomas in head due to ova or haplomycosis  
Submitter: G. E. Cosgrove
- RTLA 449. Gar, Lepisosteus sp.  
Material: Five slides  
Diagnosis: Oil granuloma  
Submitter: B. M. Levy
- RTLA 450. Coho salmon, Oncorhynchus kisutch  
Material: Seven tissue samples including gills and viscera  
Diagnosis: Thyroid hyperplasia  
Submitter: D. R. Wolfert
- RTLA 451. Coho salmon, Oncorhynchus kisutch  
Material: Seven tissue samples including gills and viscera  
Diagnosis: Thyroid hyperplasia  
Submitter: D. R. Wolfert
- RTLA 452. Coho salmon, Oncorhynchus kisutch  
Material: Seven tissue samples including gills and viscera  
Diagnosis: Thyroid hyperplasia  
Submitter: D. R. Wolfert
- RTLA 453. Coho salmon, Oncorhynchus kisutch  
Material: Seven tissue samples including gills and viscera  
Diagnosis: Thyroid hyperplasia  
Submitter: D. R. Wolfert
- RTLA 454. Coho salmon, Oncorhynchus kisutch  
Material: Seven tissue samples including gills and viscera  
Diagnosis: Thyroid hyperplasia  
Submitter: D. R. Wolfert

- RTLA 455A. & B. Boa constrictor, Boa constrictor  
 Material: One growth removed from side  
 Diagnosis: Granuloma containing a mixed bacterial population  
 Submitter: I. Gorman
- RTLA 456. Leopard frog, Rana pipiens  
 Material: Fifty-nine black and white photomicrographs  
 demonstrating various aspects of renal adenocarcinoma  
 Submitter: W. R. Duryee  
 Reprints: Duryee, William R. Factors Influencing Development  
 of Tumors in Frogs. Ann. N. Y. Acad. Sci., 126(1):  
 59-84. 1965.
- Duryee, William R. Dependence of Tumor Formation in  
 Frogs on Abnormal Nucleolar Function. In: Biology of  
Amphibian Tumors, Merle Mizell (ed.), pp. 82-100.  
 Springer-Verlag: New York/Heidelberg/Berlin. 1969.
- RTLA 457. Atlantic eel, Anguilla vulgaris  
 Material: One eel head with oral cauliflower-like growth  
 Diagnosis: Epithelial papilloma  
 Submitter: B. F. Deys  
 Reprint: Deys, B. F. Papillomas in the Atlantic eel, Anguilla  
vulgaris. Natl. Cancer Inst. Monogr. 31: 187-194. 1969.
- RTLA 458. Atlantic eel, Anguilla vulgaris  
 Material: One eel head with oral cauliflower-like growth  
 Diagnosis: Epithelial papilloma  
 Submitter: B. F. Deys  
 Reprint: [see RTLA 457]
- RTLA 459. Atlantic eel, Anguilla vulgaris  
 Material: One eel head with oral cauliflower-like growth  
 Diagnosis: Epithelial papilloma  
 Submitter: B. F. Deys  
 Reprint: [see RTLA 457]
- RTLA 460. Iguana iguana  
 Material: Four slides; two black and white photographs  
 Diagnosis: Mucin producing adenocarcinoma arising in a teratoma  
 Submitter: P. Zwart
- RTLA 461. Malayan monitor, Varanus salvator  
 Material: Eleven slides; six black and white photographs  
 Diagnosis: Lymphosarcoma  
 Submitter: P. Zwart  
 Reprint: Zwart, P. and J. C. Harshbarger. Hematopoietic Neoplasms  
 in Lizards: Report of a Typical Case in Hydrosaurus  
amboinensis and of a Probable Case in Varanus salvator.  
 Int. J. Cancer, 9: 548-553. 1972.
- RTLA 462. Two-flapped chameleon, Chamaeleo dilepis  
 Material: Eight slides  
 Diagnosis: Hyperplastic liver nodules versus well-differentiated  
 hepatomas  
 Submitter: P. Zwart

- RTLA 463. Paddlefish, Polyodon spathula  
Material: One piece of body wall with liver protruding; one slide  
Diagnosis: Fatty liver  
Submitter: C. E. Smith
- RTLA 464. Rainbow trout, Salmo gairdneri  
Material: Four pieces of tissue (eyes)  
Diagnosis: Cataract  
Submitter: C. E. Smith
- RTLA 465. Corn snake, Elaphe guttata guttata  
Material: Six slides  
Diagnosis: Chondrosarcoma  
Submitter: D. Small
- RTLA 466. Guppy, Poecilia reticulata  
Material: Two slides  
Diagnosis: Granuloma  
Submitter: D. Small
- RTLA 467. Bluegill, Lepomis macrochirus  
Material: One gross specimen  
Diagnosis: Fungus growing on back of fish and invading dorsal muscle and spinal canal  
Submitter: G. G. Combs
- RTLA 468. Yellow bullhead, Ictalurus natalis  
Material: One gross specimen  
Diagnosis: Epidermal papilloma  
Submitter: G. G. Combs
- RTLA 469. Yellow bullhead, Ictalurus natalis  
Material: One gross specimen  
Diagnosis: Epidermal papilloma  
Submitter: G. G. Combs
- RTLA 470. Yellow bullhead, Ictalurus natalis  
Material: One gross specimen  
Diagnosis: Epidermal papilloma  
Submitter: G. G. Combs
- RTLA 471. Yellow bullhead, Ictalurus natalis  
Material: One gross specimen  
Diagnosis: Epidermal papilloma  
Submitter: G. G. Combs
- RTLA 472. Brown bullhead, Ictalurus nebulosus  
Material: One gross specimen  
Diagnosis: Epidermal papilloma  
Submitter: G. G. Combs
- RTLA 473. Brown bullhead, Ictalurus nebulosus  
Material: One gross specimen  
Diagnosis: Epidermal papilloma  
Submitter: G. G. Combs

- RTLA 474. Brown bullhead, Ictalurus nebulosus  
 Material: One gross specimen  
 Diagnosis: Epidermal papilloma  
 Submitter: G. G. Combs
- RTLA 475. Brown bullhead, Ictalurus nebulosus  
 Material: One gross specimen  
 Diagnosis: Epidermal papilloma  
 Submitter: G. G. Combs
- RTLA 476. "Robalo" - Patagonian shorefish, Eleginops maclovinus  
 Material: One half of a growth on side of body wall  
 Diagnosis: Inflammatory lesion, possibly caused by unidentified yeast-like bodies around the periphery of the growth  
 Submitter: A. E. Gosztanyi
- RTLA 477. & 477A. Planarian, Planaria dactyligera musculosa  
 Material: (477) One gross specimen with finger-shaped outgrowths extending from the dorsal and lateral sides at about the middle of the body; (477A) One gross specimen with protrusion in middle of body on dorsal side  
 Diagnosis: Anomalous regeneration; etiology unknown  
 Submitter: R. Kenk
- RTLA 478. California king snake, Lampropeltis getulus  
 Material: Wet tissue; two color transparencies  
 Diagnosis: Undifferentiated sarcoma  
 Submitter: R. E. Reed and G. Migaki
- RTLA 479. Yellowfin goby, Acanthogobius flavimanus  
 Material: One microscope slide; three black and white photographs  
 Diagnosis: Epidermal papilloma  
 Submitter: S. Chun
- RTLA 480. Yellowfin goby, Acanthogobius flavimanus  
 Material: One microscope slide; three black and white photographs  
 Diagnosis: Epidermal papilloma  
 Submitter: S. Chun
- RTLA 481. Doderleinia berycoides  
 Material: One microscope slide; three black and white photographs  
 Diagnosis: Lymphocystis  
 Submitter: S. Chun
- RTLA 482. Emerald lizard, Lacerta viridis  
 Material: Two microscope slides; one black and white photograph  
 Diagnosis: Epidermal papilloma  
 Submitter: J. Kridler
- RTLA 483. Hermit crab, Coenobita clypeatus  
 Material: One gross specimen with an anterior lateral protrusion on the abdomen  
 Diagnosis: Granulomatous reaction to a branching septate fungus  
 Submitter: F. A. Chace, Jr.  
 Reprint: Chace, Fenner A. Jr. Longevity of the West Indian Terrestrial Hermit Crab, Coenobita clypeatus (Herbst, 1791) (Decapoda, Anomura). Crustaceana, Vol. 22, Part 3. 1972.

- RTLA 484. Nosema juli n. sp.  
 Material: Four microscope slides -- paratypes  
 Diagnosis: A microsporidian parasite in the millipede Diploiuulus londinensis caeruleocinctus. [See Can. J. Zool., 49(9): 1279-1282, 1971]. Slides are stored in the Protozoa Collection, Division of Echinoderms and Lower Invertebrates, U.S. National Museum of Natural History, Smithsonian Institution, Washington, D.C., 20560, under the following numbers: USNM 24279-USNM 24282.  
 Submitter: G. G. Wilson
- RTLA 485. Gray snapper, Lutjanus griseus  
 Material: Body wall tissue with large growth  
 Diagnosis: Neurofibroma  
 Submitter: A. G. Armitt
- RTLA 486. Timber rattlesnake, Crotalus horridus horridus  
 Material: One paraffin block and tissue fragments  
 Diagnosis: Fibrosarcoma  
 Submitter: H. C. Orr
- RTLA 487. Leopard frog, Rana pipiens  
 Material: One microscope slide of kidney adenocarcinoma from the Dr. Balduin Lucké collection  
 Submitter: W. R. Duryee  
 Reprint: [see RTLA 456]
- RTLA 488. Leopard frog, Rana pipiens  
 Material: One microscope slide  
 Diagnosis: Renal adenocarcinoma -- spontaneous tumor -- extremely numerous "transforming" tubules  
 Submitter: W. R. Duryee  
 Reprint: [see RTLA 456]
- RTLA 489. Leopard frog, Rana pipiens  
 Material: One microscope slide  
 Diagnosis: Lung and kidney adenocarcinoma  
 Submitter: W. R. Duryee
- RTLA 490. Leopard frog, Rana pipiens  
 Material: One microscope slide of a tissue culture  
 Diagnosis: Renal adenocarcinoma -- large nucleolar extrusion  
 Submitter: W. R. Duryee  
 Reprint: [see RTLA 456]
- RTLA 491A. Leopard frog, Rana pipiens  
 Material: Two microscope slides  
 Diagnosis: Renal adenocarcinoma -- spontaneous tumor -- "very high malignancy"  
 Submitter: W. R. Duryee  
 Reprint: [see RTLA 456]
- RTLA 491B. Leopard frog, Rana pipiens  
 Material: One microscope slide  
 Diagnosis: Papilloma on foreleg  
 Submitter: W. R. Duryee



- RTLA 492. Leopard frog, Rana pipiens  
 Material: One microscope slide  
 Diagnosis: Renal adenocarcinoma  
 Submitter: W. R. Duryee  
 Reprint: [see RTLA 456]
- RTLA 493. Black mollie, Poecilia sp.  
 Material: One gross specimen  
 Diagnosis: Multiple granulomas; bacteria suspected  
 Submitter: C. W. Shockley
- RTLA 494. Pacific electric ray, Torpedo californica  
 Material: One microscope slide  
 Diagnosis: Liver lesions produced by hydatid-like cysts  
 Submitter: A. C. Smith  
 Reprints: Smith, A. C. and H. F. Little. Liver Lesions Produced by Hydatid-Like Cysts in an Elasmobranch, the Electric Ray (Torpedo californica). Mar. Biol. (Berlin), 3(2): 136-142. 1969.  
  
 Smith, Albert C. and H. F. Little. Liver Lesions Produced by Hydatid-Like Cysts in an Elasmobranch, the Electric Ray, Torpedo californica. Natl. Cancer Inst. Monogr. 31: 251-254. 1969.
- RTLA 495. White croaker, Genyonemus lineatus  
 Material: One gross specimen with growth centrally located on head just above the mouth  
 Diagnosis: Papilloma; granulomas in heart muscle  
 Submitter: K. P. Lindstrom
- RTLA 496. Dover sole, Microstomus pacificus  
 Material: One gross specimen with "warty" lesions along the lateral line  
 Diagnosis: Ulcerated granulation tissue -- perhaps representing a sloughing healing stage of an epidermal papilloma  
 Submitter: K. P. Lindstrom
- RTLA 497. Dover sole, Microstomus pacificus  
 Material: One gross specimen with several "whitish" growths about the eyes  
 Diagnosis: Angioepithelial nodules and epidermal papilloma  
 Submitter: K. P. Lindstrom
- RTLA 498. Boa constrictor, Boa constrictor  
 Material: One microscope slide  
 Diagnosis: Epidermal papilloma  
 Submitter: R. B. Northway
- RTLA 499. Carp, Cyprinus carpio  
 Material: Two pieces of tissue  
 Diagnosis: Neurilemmoma  
 Submitter: G. E. Cosgrove

- RTLA 500. Florida pompano, Trachinotus carolinus  
 Material: Two microscope slides  
 Diagnosis: Thyroid hyperplasia versus low-grade follicular carcinoma  
 Submitter: R. E. Putz
- RTLA 501. Red-spotted newt, Notophthalmus viridescens  
 Material: Four microscope slides  
 Diagnosis: Fungi (haplomycesis) versus parasite ova  
 Submitter: G. E. Cosgrove
- RTLA 502. American oyster, Crassostrea virginica  
 Material: Ten microscope slides  
 Diagnosis: Diffuse sarcomoid neoplasm  
 Submitter: M. Newman  
 Reprint: Newman, Martin W. An Oyster Neoplasm of Apparent Mesenchymal Origin. J. Natl. Cancer Inst., 48: 237-243, 1972.
- RTLA 503. Australian skink, Egernia napoleonsis  
 Material: One piece of liver tissue  
 Diagnosis: Mycobacterial granuloma  
 Submitter: E. Elkan
- RTLA 504. Starry flounder, Platichthys stellatus  
 Material: One gross specimen with extremely numerous growths mostly on fins and pigmented side  
 Diagnosis: Granuloma in response to parasite ova plus epidermal hyperplasia  
 Submitter: B. F. Deys
- RTLA 505. Starry flounder, Platichthys stellatus  
 Material: One gross specimen with growths on fins and top and bottom of head  
 Diagnosis: Granuloma in response to parasite ova with epidermal hyperplasia  
 Submitter: B. F. Deys
- RTLA 506. Mexican axolotl, Ambystoma mexicanum  
 Material: Forty-six microscope slides  
 Diagnosis: Lymphoma  
 Submitter: L. E. DeLanney  
 Reprint: DeLanney, L. E. Lymphosarcoma in the Mexican Axolotl, Ambystoma mexicanum. in: Comparative Leukemia Research 1969. Bibl. haemat., No. 36, R. M. Dutcher (ed.), p. 642 (Karger, Basel/München/Paris/New York 1970).
- RTLA 507. Everglade snake, Elaphe obsoleta rossalenii  
 Material: Two pieces of tissue; two microscope slides  
 Diagnosis: Malignant melanoma  
 Submitter: E. Elkan
- RTLA 508. River jack or Rhinoceros viper, Bitis nasicornis  
 Material: Three microscope slides  
 Diagnosis: Granulocytic leukemia versus granulocytic leukemoid reaction  
 Submitter: R. L. Snyder

- RTLA 509. Turtle, Terrapene carolina  
 Material: One gross specimen  
 Diagnosis: Bacterial granuloma  
 Submitter: C. Gans
- RTLA 510. Bufo arenarum  
 Material: One microscope slide  
 Diagnosis: Infectious granuloma  
 Submitter: E. S. de Lustig
- RTLA 511. Keyhole cichlid, Aequidens maronii  
 Material: One color transparency; one microscope slide  
 Diagnosis: Malignant lymphoma  
 Submitter: R. E. Wolke
- RTLA 512. Killifish, Fundulus sp.  
 Material: Two gross specimens; one with a soft white protrusion  
                   in front of left eye  
 Diagnosis: Microsporida infection  
 Submitter: A. C. Smith and R. L. Taylor
- RTLA 513. Firebellied newt, Cynops pyrrhogaster  
 Material: One gross specimen  
 Diagnosis: Papilloma  
 Submitter: W. R. Duryee
- RTLA 514. Lake trout, Salvelinus namaycush  
 Material: Two pieces of tissue; one microscope slide  
 Diagnosis: Fibroma  
 Submitter: L. P. E. Choquette  
 Reprint: Broughton, E. and L. P. E. Choquette. Subcutaneous  
           Fibroma in Lake Trout (Salvelinus namaycush) in Quebec.  
           J. Fish. Res. Board Can., 28(3): 448-449. 1971.
- RTLA 515. Angelfish  
 Material: Two microscope slides; one color transparency  
 Diagnosis: Melanoma involving eye  
 Submitter: L. E. Mawdesley-Thomas (via D. Bucke)  
 Reprint: Mawdesley-Thomas, Lionel E. Neoplasia in Fish: A  
           Review. in: Current Topics in Comparative Pathobiology.  
           Vol. 1, T. C. Cheng (ed.), pp. 87-170 (Academic, New York  
           and London 1971).
- RTLA 516. Ide or Golden orfe, Leuciscus idus  
 Material: One microscope slide; one color transparency  
 Diagnosis: Papilloma with inflammation  
 Submitter: D. Bucke and L. E. Mawdesley-Thomas
- RTLA 517. Cod, Gadus morhua  
 Material: One microscope slide  
 Diagnosis: Malignant melanoma infiltrating muscle tissue  
 Submitter: L. E. Mawdesley-Thomas (via D. Bucke)  
 Reprint: [see RTLA 515]

- RTLA 518. Brown trout, Salmo trutta  
 Material: One microscope slide; one color transparency  
 Diagnosis: Fibroma  
 Submitter: L. E. Mawdesley-Thomas (via D. Bucke)
- RTLA 519. Haddock, Melanogrammus aeglefinus  
 Material: Two microscope slides; one color transparency  
 Diagnosis: Fibroma  
 Submitter: L. E. Mawdesley-Thomas (via D. Bucke)  
 Reprint: [see RTLA 515]
- RTLA 520. Sea morid  
 Material: Two microscope slides  
 Diagnosis: Parasitic (?) cyst  
 Submitter: L. E. Mawdesley-Thomas (via D. Bucke)  
 Reprint: [see RTLA 515]
- RTLA 521. Whiting, Merlangius merlangus  
 Material: Two microscope slides  
 Diagnosis: Fibroma  
 Submitter: L. E. Mawdesley-Thomas (via D. Bucke)  
 Reprint: [see RTLA 515]
- RTLA 522. Plaice, Pleuronectes platessa  
 Material: Two color transparencies  
 Diagnosis: Pigmented parasitic cyst  
 Submitter: L. E. Mawdesley-Thomas (via D. Bucke)
- RTLA 523. Sandbar shark, Carcharhinus milberti  
 Material: Four microscope slides  
 Diagnosis: Reticulum cell sarcoma, spleen (only known example of a lymphoreticular or hematopoietic neoplasm in Chondrichthyes)  
 Submitter: R. O'Gara and V. T. Oliverio
- RTLA 524. Sandbar shark, Carcharhinus milberti  
 Material: Fifteen microscope slides  
 Diagnosis: Granulomatous reaction to infection by acid-fast organism [Mycobacterium (?), Nocardia (?)]  
 Submitter: R. O'Gara and V. T. Oliverio
- RTLA 525. Walleye, Stizostedion vitreum vitreum  
 Material: Two pieces of tissue; two microscope slides  
 Diagnosis: Granulomas in response to fungi  
 Submitter: C. E. Smith
- RTLA 526. Chinook salmon, Oncorhynchus tshawytscha  
 Material: Kidney  
 Diagnosis: Well-differentiated nephroblastoma with lithiasis  
 Submitter: J. G. Hnath
- RTLA 527. Rainbow trout, Salmo gairdneri  
 Material: Liver  
 Diagnosis: Hepatoma  
 Submitter: J. G. Hnath

- RTLA 528. Plaice, Pleuronectes platessa  
Material: One paraffin block  
Diagnosis: Inflammation  
Submitter: R. Roberts
- RTLA 529. Plaice, Pleuronectes platessa  
Material: One paraffin block  
Diagnosis: Inflammation  
Submitter: R. Roberts
- RTLA 530. Coho salmon, Oncorhynchus kisutch  
Material: Large tumor; one color photograph  
Diagnosis: Fibroma  
Submitter: G. R. Bell
- RTLA 531. Tilehorned prionus -- larvae, Prionus imbricornis  
Material: Twenty-nine microscope slides  
Diagnosis: Multiple granulomas in hemocoel  
Submitter: G. E. Cosgrove
- RTLA 532. Elephant trunk snake, Acrochordus javanicus  
Material: Two microscope slides; one photograph  
Diagnosis: Ovarian fibroma  
Submitter: P. Zwart
- RTLA 533. Coho salmon, Oncorhynchus kisutch  
Material: One gross specimen  
Diagnosis: Osteoma  
Submitter: J. G. Hnath
- RTLA 534. Red-spotted newt, Notophthalmus viridescens  
Material: Three microscope slides  
Diagnosis: Adiaspiromycosis  
Submitter: G. E. Cosgrove
- RTLA 535. Enchytraeus sp.  
Material: Gross specimens from colony with reduced reproduction  
Diagnosis: Parasitized by nematodes  
Submitter: G. E. Cosgrove
- RTLA 536. Sheepshead minnow, Cyprinodon variegatus  
Material: One gross specimen with seven large surface protrusions  
Diagnosis: Parasitic lesions in response to Myxosporidia  
Submitter: B. B. Collette and M. Wiley
- RTLA 537. Freshwater bivalve, Dreissena polymorpha  
Material: Six microscope slides  
Diagnosis: Granuloma  
Submitter: B. S. Morton
- RTLA 538. Black-lip pearl oyster, Pinctada margaritifera  
Material: Two photographs; eight microscope slides  
Diagnosis: Benign fibrovascular polyp  
Submitter: T. G. Dix  
Reprint: Dix, Trevor G. Two Mesenchymal Tumors in a Pearl Oyster, Pinctada margaritifera, J. Invertebr. Pathol., 20(3): 317-320. 1972.

- RTLA 539. Firebellied newt, Cynops pyrrhogaster  
Material: One gross specimen  
Diagnosis: Epidermal papilloma  
Submitter: W. R. Duryee
- RTLA 540. Firebellied newt, Cynops pyrrhogaster  
Material: One gross specimen  
Diagnosis: Papilloma  
Submitter: W. R. Duryee
- RTLA 541. Chlamys (Lyropecten) madisonius (fossil specimen)  
Material: Gross specimen -- left valve only -- formation anterior to the muscle scar  
Diagnosis: Blister between two layers of foliated calcite with a hole, presumably drilled by a parasite, to the surface  
Submitter: M. O'Keefe
- RTLA 542. Panope americana (fossil specimen)  
Material: Gross specimen -- left valve only -- formation underneath the umbo  
Diagnosis: Reactive deposition of presumptive conchiolin  
Submitter: M. O'Keefe
- RTLA 543. Panope americana (fossil specimen)  
Material: Gross specimen -- right valve only -- formation anterior and below the pallial sinus  
Diagnosis: Reactive deposition of presumptive conchiolin  
Submitter: M. O'Keefe
- RTLA 544. Panope americana (fossil specimen)  
Material: Gross specimen -- left valve only -- formation just posterior to the anterior muscle scar  
Diagnosis: Reactive deposition of presumptive conchiolin  
Submitter: M. O'Keefe
- RTLA 545. Panope americana (fossil specimen)  
Material: Gross specimen -- left valve only -- formation centrally located just beneath the pallial line  
Diagnosis: Reactive deposition of presumptive conchiolin  
Submitter: M. O'Keefe
- RTLA 546. Largetooth sawfish, Pristis perotteti  
Material: Two microscope slides  
Diagnosis: Wound repair  
Submitter: T. B. Thorson
- RTLA 547. Bull shark, Carcharhinus leucas  
Material: Two microscope slides  
Diagnosis: Wound repair  
Submitter: T. B. Thorson
- RTLA 548. South American gartersnake, Liophis sp.  
Material: One piece of tissue; one color transparency  
Diagnosis: Muscle degeneration due to mechanical injury  
Submitter: J. A. Peters

- RTLA 549. White croaker, Genyonemus lineatus  
 Material: Four microscope slides; two black and white photographs  
 Diagnosis: Epidermal papilloma  
 Submitter: A. Lawson Bane, A. Thompson, K. P. Lindstrom, Dr. Pflaum
- RTLA 550. Cunner, Tautogolabrus adspersus  
 Material: One gross specimen  
 Diagnosis: Epidermal papilloma  
 Submitter: G. W. Bane and S. Shumway
- RTLA 551. Cunner, Tautogolabrus adspersus  
 Material: One gross specimen  
 Diagnosis: Epidermal papilloma  
 Submitter: G. W. Bane and S. Shumway
- RTLA 552. Cunner, Tautogolabrus adspersus  
 Material: One gross specimen  
 Diagnosis: Epidermal papilloma  
 Submitter: G. W. Bane and S. Shumway
- RTLA 553. Cunner, Tautogolabrus adspersus  
 Material: One gross specimen  
 Diagnosis: Epidermal papilloma  
 Submitter: G. W. Bane and S. Shumway
- RTLA 554. Dwarf gourami, Colias lalia  
 Material: One gross specimen; three black and white photographs;  
 two color transparencies  
 Diagnosis: Granuloma  
 Submitter: C. A. Green and C. J. Dawe
- RTLA 555. Fish  
 Material: Three gross specimens  
 Diagnosis: Death by asphyxiation  
 Submitter: G. C. Williams
- RTLA 556. Cobra, Naja naja  
 Material: One piece of pancreatic tissue and a growth found in  
 the peritoneal membrane  
 Diagnosis: Granuloma  
 Submitter: V. Lance
- RTLA 557. Cobra, Naja naja  
 Material: One piece of liver tissue  
 Diagnosis: Granuloma  
 Submitter: V. Lance
- RTLA 558. Cobra, Naja naja  
 Material: Two pieces of liver tissue  
 Diagnosis: Granuloma  
 Submitter: V. Lance
- RTLA 559. Cobra, Naja naja  
 Material: Gall bladder  
 Diagnosis: Granuloma  
 Submitter: V. Lane

- RTLA 560. Cobra, Naja naja  
 Material: One piece of liver tissue and one piece of rectal tissue  
 Diagnosis: Leiomyosarcoma  
 Submitter: V. Lance
- RTLA 561. Cobra, Naja naja  
 Material: Two paraffin blocks of liver tissue  
 Diagnosis: Granuloma  
 Submitter: V. Lance
- RTLA 562. Crayfish, Procambarus clarkii  
 Material: Twenty-six vials of gross specimens; 300-400 microscope slides; 100-200 photographs  
 Diagnosis: Tubular cell hyperplasia in the hepatopancreas and degeneration of the antennal glands due to the effects of N-nitrosodimethylamine  
 Submitter: J. C. Harshbarger, G. E. Cantwell, and M. F. Stanton  
 Reprint: Harshbarger, J. C., G. E. Cantwell, and M. F. Stanton. Effects of N-nitrosodimethylamine on the Crayfish, Procambarus clarkii. In: Proceedings [of the] IV International Colloquium on Insect Pathology [and] The Society for Invertebrate Pathology, College Park, Maryland, 25-28 August 1970, pp. 425-430. 1970.
- RTLA 563. Pecan weevil, Curculio caryae  
 Material: Four gross specimens (grubs)  
 Diagnosis: Infected with Metarrhizium fungus  
 Submitter: G. E. Cosgrove and W. L. Tedders
- RTLA 564. Pecan weevil, Curculio caryae  
 Material: Five gross specimens (grubs)  
 Diagnosis: Infected with Beauveria fungus  
 Submitter: G. E. Cosgrove and W. L. Tedders
- RTLA 565. Eel, Ilyophis brunneus  
 Material: One gross specimen with enlargement on cranium  
 Diagnosis: Normal muscle  
 Submitter: R. H. Kanazawa
- RTLA 566. Rainbow trout, Salmo gairdneri  
 Material: Five microscope slides  
 Diagnosis: General toxicosis and a small hepatoma in the liver  
 Submitter: C. E. Smith
- RTLA 567. Rainbow trout, Salmo gairdneri  
 Material: Four microscope slides  
 Diagnosis: General toxicosis  
 Submitter: C. E. Smith
- RTLA 568. Rainbow trout, Salmo gairdneri  
 Material: Three microscope slides  
 Diagnosis: General toxicosis  
 Submitter: C. E. Smith



- RTLA 569. Scallop, Aequipecten irradians  
 Material: Adductor muscles  
 Diagnosis: Granuloma in response to gram-positive bacteria  
 Submitter: E. J. Petrovits
- RTLA 570. Oncorhynchus rhodurus f. macrostomus  
 Material: Six microscope slides  
 Diagnosis: Liver -- hepatoma; stomach -- adenomatous polyps of gastric mucosa  
 Submitter: I. Kimura
- RTLA 571. Oncorhynchus rhodurus f. macrostomus  
 Material: Six microscope slides  
 Diagnosis: Liver -- hepatoma; stomach -- adenomatous polyps of gastric mucosa  
 Submitter: I. Kimura
- RTLA 572. Oncorhynchus masou ishikawae  
 Material: One microscope slides; one piece of tissue  
 Diagnosis: Multiple well-differentiated hepatomas  
 Submitter: F. Takashima  
 Reprint: Takashima, Fumio and Takashi Hibiya. Hepatic Tumors in Yamamé, Oncorhynchus masou ishikawae: A Preliminary Report. Bull. Jap. Soc. Sci. Fish., 38(9): 955-964. 1972.
- RTLA 573. Salvelinus miyabei x S. fontinalis  
 Material: Two microscope slides; one piece of tissue  
 Diagnosis: Subcutaneous fibrosarcoma; metastatic fibrosarcoma of kidney  
 Submitter: F. Takashima  
 Reprint: Takashima, Fumio and Takashi Hibiya. Fibrosarcoma in Pond-Cultured Hybrids of Salvelinus. Jap. J. Ichthyol., 19(2): 97-102. 1972.
- RTLA 574. Coho salmon, Oncorhynchus kisutch  
 Material: Two pieces of wet thyroid tissue  
 Diagnosis: Normal  
 Submitter: L. M. Ashley
- RTLA 575. Channel catfish, Ictalurus punctatus  
 Material: Two microscope slides  
 Diagnosis: Viral inclusions  
 Submitter: C. E. Smith
- RTLA 576A., B., C. Fungus, Emmonsia crescens  
 Material: Liver tissue from a monkey, pack rat, and guinea pig  
 Diagnosis: Experimental infection  
 Submitter: W. L. Jellison
- RTLA 577. Leopard frog, Rana pipiens; Red-spotted newt, Cynops pyrrhogaster; Marbled salamander, Ambystoma opacum larvae  
 Material: Collection contains meticulously kept data books, hundreds of reprints, photographs, and paraffin blocks and approximately 12,000 microscope slides of naturally occurring,

experimentally induced and tissue culture material from the Lucké renal adenocarcinoma of Rana pipiens including some of Dr. Lucké's original slides. The collection also contains several hundred slides of tumors (principally papillomas) of the red-spotted newt, Cynops pyrrhogaster and microscope slides from Ambystoma opacum larvae used in experimental studies.

Submitter: W. R. Duryee

Reprint: [see RTLA 456]

RTLA 578. Planarian, Dugesia dorotocephala

Material: Six pieces of tissue; five black and white photographs; one film strip

Diagnosis: Anomalous regeneration; etiology unknown

Submitter: R. Kenk

RTLA 579. Earthworm, Lumbricus terrestris

Material: Seven vials of pieces of worm; two color transparencies

Diagnosis: Worms experimentally treated with the pesticide, Carbofuran

Submitter: A. P. Gilman

RTLA 580. Coho salmon, Oncorhynchus kisutch

Material: Four pieces of thyroid tissue

Diagnosis: Normal

Submitter: W. T. Yasutake

RTLA 581. Manure worm, Eisenia foetida

Material: One color transparency

Diagnosis: Worm experimentally treated with the pesticide, Carbofuran

Submitter: A. P. Gilman

RTLA 582. Yellow bullhead, Ictalurus natalis

Material: One gross specimen

Diagnosis: Papilloma

Submitter: G. G. Combs

RTLA 583. Catfish, Ictalurus sp.

Material: One gross specimen

Diagnosis: Papilloma

Submitter: G. G. Combs

RTLA 584. Yellow bullhead, Ictalurus natalis

Material: One gross specimen

Diagnosis: Nevus

Submitter: G. G. Combs

RTLA 585. Bluegill, Lepomis macrochirus

Material: One gross specimen with unusually shallow dorsal muscle and unusually short dorsal fin

Diagnosis: Developmental anomaly

Submitter: D. Gaines

- RTLA 586. Bluegill, Lepomis macrochirus  
 Material: One gross specimen  
 Diagnosis: Granulomas associated with defect in skeletal muscle adjacent to anal fin  
 Submitter: D. Gaines
- RTLA 587. Dinosaur, Allosaurus fragilis  
 Material: Petrified bones  
 Diagnosis: Various examples of callus formation, osteomyelitis and perhaps ankylosis  
 Submitter: J. H. Madsen, Jr. and M. A. Carey
- RTLA 588. Boa constrictor, Boa constrictor  
 Material: One piece of tissue  
 Diagnosis: Fibroma versus fibrocarcinoma  
 Submitter: B. L. Burge
- RTLA 589. Atlantic salmon, Salmo salar  
 Material: Five microscope slides  
 Diagnosis: Epidermal carcinoma  
 Submitter: R. J. Roberts
- RTLA 590. Rainbow trout, Salmo gairdneri  
 Material: Three microscope slides  
 Diagnosis: Unusual cells in the liver and the spleen believed to be a protozoan parasite. (Reminiscent of Leishmania).  
 Submitter: R. J. Roberts
- RTLA 591. Alpine newt, Triturus alpestris  
 Material: One microscope slide  
 Diagnosis: Neuroepithelioma  
 Submitter: J. Darquenne  
 Reprint: Darquenne, Jacques. Actions de substances cancérigènes sur le régénérat de la queue de Triturus alpestris Laur. (Amphibiens, Salamandridés). C. R. Hebd. Seances Acad. Sci., Ser. D, Sci. Nat. (Paris), 273(16): 1460-1462. 1971.
- RTLA 592. Rainbow trout, Salmo gairdneri  
 Material: One microscope slide  
 Diagnosis: Hepatoma  
 Submitter: C. E. Smith
- RTLA 593. Shortnose batfish, Ogcocephalus nasutus  
 Material: One microscope slide  
 Diagnosis: Lymphocystis -- the growth was 2-3 c. in diameter and was located on the caudal peduncle of the specimen  
 Submitter: C. E. Smith
- RTLA 594. Cichlasoma festivum  
 Material: Three pieces of stomach tissue; one microscope slide  
 Diagnosis: Gastric leiomyoma  
 Submitter: R. Bootsma

- RTLA 595A. & B. Coho salmon, Oncorhynchus kisutch  
 Material: 595A -- five emaciated, lethargic fingerlings  
 595B -- five normal fingerlings  
 Diagnosis: No histologic lesions  
 Submitter: J. G. Hnath
- RTLA 596. Striped mojarra, Diapterus plumieri  
 Material: One gross tumor specimen; six microscope slides  
 Diagnosis: Lipoma -- this striped mojarra is reported as the  
 thirteenth fish known with a lipoma  
 Submitter: F. J. Schwartz  
 Reprint: Schwartz, F. J. and René Márquez. A Lipoma in the  
 Striped Mojarra, Diapterus plumieri (Pisces: Gerridae)  
 from Mexico. J. Elisha Mitchell Sci. Soc., 87(3): 87-90.  
 1971.
- RTLA 597. Bullhead, Ictalurus sp.  
 Material: One gross specimen  
 Diagnosis: Malignant melanoma  
 Submitter: E. L. King, Jr.
- RTLA 598. Tilehorned prionus, Prionus imbricornis  
 Material: Four pieces of larvae  
 Diagnosis: Extensive fungal invasion  
 Submitter: G. E. Cosgrove and J. A. Payne
- RTLA 599. Staghorn coral, Acropora formosa  
 Material: Three microscope slides  
 Diagnosis: Polyp; possibly in response to trematode parasite  
 Submitter: D. P. Cheney  
 Reprints: Wong, Alan and Thomas C. Cheng. Histochemical and  
 Histopathological Studies on Corals, Porites spp.,  
 Parasitized by Trematode Metacercariae. Soc. Invertebr.  
 Pathol. Newsletter, 2(2): 23-24. 1969.  
  
 Cheney, D. P., A. J. Loerzel, R. H. Randall, and M. R.  
 Struck. A Coralline Tumor of Acropora formosa from Guam.  
 Soc. Invertebr. Pathol. Newsletter, 2(6): 13. 1970.  
  
 Cheney, Daniel P. Coral Tumors. Guam Sci. Teachers  
 Assoc. Newsletter, Vol. 6, No. 7. 6 March 1972.
- RTLA 600. White perch, Morone americana  
 Material: One gross specimen with a large, soft, spongy swelling  
 on the ventral side posterior to the gills and extending  
 to the anal fin  
 Diagnosis: Biliary duct cyst  
 Submitter: D. Ritchie and B. B. Collette
- RTLA 601. White perch, Morone americana  
 Material: One gross specimen with excessive mucus secretion  
 Diagnosis: Pending  
 Submitter: D. Ritchie and B. B. Collette

- RTLA 602. Australian rock oyster, Crassostrea commercialis  
 Material: Four microscope slides  
 Diagnosis: Polypoid pericardial tumor of Leydig cell origin  
 Submitter: P. Dinamani  
 Reprint: Dinamani, P. and Peter H. Wolf. Multiple Tumors in the Pericardial Cavity of an Australian Rock Oyster, Crassostrea commercialis (Iredale and Roughley). Int. J. Cancer, 11: 293-299. 1973.
- RTLA 603. Longnose gar, Lepisosteus osseus  
 Material: Eight microscope slides; one photograph  
 Diagnosis: Benign epithelioma on the pelvic fin  
 Submitter: J. D. Hendricks
- RTLA 604. Staghorn coral, Acropora formosa  
 Material: One gross specimen  
 Diagnosis: Polyp; possibly in response to trematode parasite  
 Submitter: D. P. Cheney  
 Reprints: [see RTLA 599]
- RTLA 605. Staghorn coral, Acropora formosa  
 Material: One gross specimen  
 Diagnosis: Polyp; possibly in response to trematode parasite  
 Submitter: D. P. Cheney  
 Reprints: [see RTLA 599]
- RTLA 606. Staghorn coral, Acropora formosa  
 Material: One gross specimen  
 Diagnosis: Polyp; possibly in response to trematode parasite  
 Submitter: D. P. Cheney  
 Reprints: [see RTLA 599]
- RTLA 607. Guppy, Poecilia reticulata  
 Material: One gross specimen  
 Diagnosis: Developmental defect composed of striated muscle and bone  
 Submitter: J. S. Laurie
- RTLA 608. Weakfish, Cynoscion regalis  
 Material: Eight microscope slides; two photographs  
 Diagnosis: Early well-differentiated lipoma versus developmental anomaly  
 Submitter: J. D. Hendricks  
 Reprints: Tubiash, Haskell S. and Jerry D. Hendricks. A Possible Lipoma in the Weakfish, Cynoscion regalis (Bloch and Schneider). [in preparation].
- RTLA 609. Hogchoker, Trinectes maculatus  
 Material: Six microscope slides  
 Diagnosis: Well-differentiated lipoma or anomalous deposit  
 Submitter: M. W. Newman
- RTLA 610. Croaker  
 Material: Three consecutive caudal vertebrae  
 Diagnosis: Multiple exostosis of the neural and haemal spines  
 Submitter: M. Landolt

- RTLA 611. Croaker  
Material: Two consecutive caudal vertebrae  
Diagnosis: Multiple exostosis of the neural and haemal spines  
Submitter: M. Landolt
- RTLA 612. Walleye, Stizostedion vitreum vitreum  
Material: Part of the caudal fin with part of a tumor attached;  
four microscope slides; fourteen photographs  
Diagnosis: Cutaneous fibroma  
Submitter: D. Woronecki
- RTLA 613. White catfish, Ictalurus catus  
Material: One piece of tissue; four microscope slides; two  
photographs  
Diagnosis: Reticulum cell sarcoma  
Submitter: M. Landolt
- RTLA 614. African clawed toad, Xenopus laevis  
Material: One hind leg  
Diagnosis: Chondrification associated with hemorrhage and repair  
Submitter: G. E. Cosgrove
- RTLA 615. Earthworm, Lumbricus terrestris  
Material: Portions of two worms experimentally treated with 11  
ug Carbofuran; one with an enlarged area  
Diagnosis: Heavy nematode infection  
Submitter: A. P. Gilman
- RTLA 616. Earthworm, Lumbricus terrestris  
Material: One whole and two portions of worms experimentally  
treated with 5 ug of a Carbofuran metabolite, 3-  
hydroxycarbofuran showing blister-like lesions  
Diagnosis: Heavy nematode infection  
Submitter: A. P. Gilman
- RTLA 617. Earthworm, Lumbricus terrestris  
Material: One gross specimen experimentally treated with 57 ug of a  
Carbofuran metabolite, 3-hydroxycarbofuranphenol showing  
blister-like lesions  
Diagnosis: Heavy nematode infection  
Submitter: A. P. Gilman
- RTLA 618. Earthworm, Lumbricus terrestris  
Material: One gross specimen experimentally treated with ug Bux  
(a carbamate insecticide) showing collar-like protrusions  
Diagnosis: Heavy nematode infection  
Submitter: A. P. Gilman
- RTLA 619. Earthworm, Lumbricus terrestris  
Material: Whole and one portion of worm experimentally treated with  
17 ug Lannate (a carbamate insecticide) showing numerous  
blister-like lesions  
Diagnosis: Heavy nematode infection  
Submitter: A. P. Gilman

- RTLA 620. Yellow bullhead, Ictalurus natalis  
 Material: One gross specimen  
 Diagnosis: Melanoma  
 Submitter: J. A. Couch
- RTLA 621. Yellow bullhead, Ictalurus natalis  
 Material: One gross specimen  
 Diagnosis: Melanoma  
 Submitter: J. A. Couch
- RTLA 622. Rainbow trout, Salmo gairdneri  
 Material: Branchial arch with enlarged thyroid; two microscope slides  
 Diagnosis: Follicular adenocarcinoma of the thyroid  
 Submitter: E. Mateo and M. Landolt
- RTLA 623A. & B. Northern pike, Esox lucius  
 Material: One gross specimen with two ulcerative lesions along the dorsal surface  
 Diagnosis: Probable lymphosarcoma -- tissue too autolyzed for confirmation  
 Submitter: E. R. Brown
- RTLA 624. Walleye, Stizostedion vitreum vitreum  
 Material: One gross specimen with multiple nodular growths  
 Diagnosis: Lymphocystis  
 Submitter: E. R. Brown
- RTLA 625. Walleye, Stizostedion vitreum vitreum  
 Material: One gross specimen with soft blister-like growths in the webbing of the caudal fin  
 Diagnosis: Lymphocystis  
 Submitter: E. R. Brown
- RTLA 626. Walleye, Stizostedion vitreum vitreum  
 Material: One gross specimen with a mid-lateral protrusion on the right side just posterior to the operculum  
 Diagnosis: Probable neurilemmoma -- tissue too autolyzed for confirmation  
 Submitter: E. R. Brown
- RTLA 627. Walleye, Stizostedion vitreum vitreum  
 Material: One gross specimen with soft blister-like growths in the webbing of all the fins  
 Diagnosis: Lymphocystis  
 Submitter: E. R. Brown
- RTLA 628. Ghost shrimp, Callinassa affinis  
 Material: Three microscope slides  
 Diagnosis: Digestive gland and integument lesions associated with malnutrition  
 Submitter: A. C. Smith  
 Reprint: Smith, Albert C. and Tonalld L. Taylor. Digestive Gland and Integument Lesions Associated with Malnutrition in a Ghost Shrimp, Callinassa affinis. J. Invertebr. Pathol., 12(1): 1-6. 1968.

- RTLA 629. Rainbow trout, Salmo gairdneri  
 Material: Most of the upper jaw with part of a growth broadly attached to the outside surface; one photograph  
 Diagnosis: Fibroma  
 Submitter: P. H. Wolf
- RTLA 630. Rainbow trout, Salmo gairdneri  
 Material: Fifteen microscope slides; one photograph  
 Diagnosis: Thymic lymphoma -- probably with leukemia  
 Submitter: C. E. Smith
- RTLA 631. Australian snake-necked turtle, Chelodina longicollis  
 Material: Growth from the dorsal side of the proximal end of the neck  
 Diagnosis: Multiple granulomas with a bacterial etiology  
 Submitter: W. Frair
- RTLA 632. Nile monitor lizard, Varanus niloticus  
 Material: Four microscope slides  
 Diagnosis: Pre-neoplastic nodule versus a minimal deviation hepatoma  
 Submitter: P. Zwart
- RTLA 633. African sungazer lizard, Cordylus polyzonus  
 Material: Two microscope slides  
 Diagnosis: Adenoma of the thyroid  
 Submitter: P. Zwart
- RTLA 634. Garter snake, Thamnophis sirtalis  
 Material: Two microscope slides  
 Diagnosis: Cholangioma  
 Submitter: P. Zwart
- RTLA 635. Nile monitor lizard, Varanus niloticus  
 Material: Seven microscope slides  
 Diagnosis: Probable plasma cell tumor  
 Submitter: P. Zwart
- RTLA 636. Thorny skate, Raja radiata  
 Material: One greatly enlarged testis  
 Diagnosis: Adenoma of seminiferous epithelium (tentative)  
 Submitter: M. Newman
- RTLA 637. Tiger swallowtail, Papilio glaucus  
 Material: One gross specimen with a growth approximately .5 cm. in diameter on the abdomen  
 Diagnosis: Salivary reservoir cyst containing bacteria and fungi  
 Submitter: K. Wolf
- RTLA 638. Walleye, Stizostedion vitreum vitreum  
 Material: One gross specimen with multiple raised lesions  
 Diagnosis: Epidermal hyperplasia  
 Submitter: E. R. Brown
- RTLA 639. White sucker, Catostomus commersoni  
 Material: One gross specimen  
 Diagnosis: Tissue unsuitable for diagnosis  
 Submitter: E. R. Brown



- RTLA 640. Northern pike, Esox lucius  
Material: One gross specimen  
Diagnosis: Epidermal hyperplasia  
Submitter: E. R. Brown
- RTLA 641. Walleye, Stizostedion vitreum vitreum  
Material: One gross specimen  
Diagnosis: Epidermal hyperplasia  
Submitter: E. R. Brown
- RTLA 642. Walleye, Stizostedion vitreum vitreum  
Material: One gross specimen  
Diagnosis: Epidermal hyperplasia  
Submitter: E. R. Brown
- RTLA 643. Walleye, Stizostedion vitreum vitreum  
Material: One gross specimen  
Diagnosis: Epidermal hyperplasia  
Submitter: E. R. Brown
- RTLA 644. Northern pike, Esox lucius  
Material: One gross specimen  
Diagnosis: Epidermal hyperplasia  
Submitter: E. R. Brown
- RTLA 645. White sucker, Catostomus commersoni  
Material: One gross specimen  
Diagnosis: Epidermal hyperplasia  
Submitter: E. R. Brown
- RTLA 646. White sucker, Catostomus commersoni  
Material: One gross specimen  
Diagnosis: Cutaneous papilloma  
Submitter: E. R. Brown
- RTLA 647. Northern pike, Esox lucius  
Material: One fish head  
Diagnosis: Epidermal hyperplasia  
Submitter: E. R. Brown
- RTLA 648. Kahawai, Arripis trutta  
Material: Portion of the right body wall containing one-half of a growth  
Diagnosis: Well-differentiated lipoma  
Submitter: P. M. Hine
- RTLA 649. Sheepshead, Archosargus probatocephalus  
Material: A piece of body wall consisting of normal appearing tissue with a growth attached to the outer surface  
Diagnosis: Guanophoroma  
Submitter: W. E. Ribelin
- RTLA 650. Croaker  
Material: One microscope slide  
Diagnosis: Neuroblastoma; retinoneuroblastoma  
Submitter: M. M. Sigel

- RTLA 651. Green turtle, Chelonia mydas  
Material: Six microscope slides  
Diagnosis: Fibropapilloma  
Submitter: R. M. Overstreet
- RTLA 652. Lingcod, Ophiodon elongatus  
Material: One piece of tissue  
Diagnosis: Lymphocystis  
Submitter: G. R. Bell
- RTLA 653. Sockeye salmon, Oncorhynchus nerka  
Material: An excised growth  
Diagnosis: Papillary adenocarcinoma  
Submitter: G. R. Bell
- RTLA 654. Florida softshell (turtle), Trionyx ferox  
Material: Three microscope slides  
Diagnosis: Granulocytic neoplasm versus a reticulum cell sarcoma  
Submitter: P. Zwart
- RTLA 655. Goldfish, Carassius auratus  
Material: The right half of the head and a transverse section through the gill chamber  
Diagnosis: Fibroma  
Submitter: E. C. Bay
- RTLA 656. Leopard frog, Rana pipiens  
Material: Two microscope slides  
Diagnosis: Epidermal papilloma  
Submitter: B. J. Cohen
- RTLA 657. Leopard frog, Rana pipiens  
Material: Four microscope slides  
Diagnosis: Squamous cell carcinoma  
Submitter: B. J. Cohen
- RTLA 658. Leopard frog, Rana pipiens  
Material: Four microscope slides  
Diagnosis: Squamous cell carcinoma; epidermal hyperplasia  
Submitter: B. J. Cohen
- RTLA 659. Leopard frog, Rana pipiens  
Material: Two microscope slides  
Diagnosis: Dermal gland adenocarcinoma  
Submitter: B. J. Cohen
- RTLA 660. Leopard frog, Rana pipiens  
Material: Eight microscope slides  
Diagnosis: Invasive squamous cell carcinoma  
Submitter: B. J. Cohen
- RTLA 661A. & B. Spotted-newt, Notophthalmus viridescens  
Material: Six pathologic gross specimens; two normal gross specimens  
Diagnosis: Adiaspiromycosis  
Submitter: N. Cohen

- RTLA 662. Spotted newt, Notophthalmus viridescens  
Material: A hard lump biopsied from the tail  
Diagnosis: Group of hypertrophic sub-epidermal glands associated with parasitic worms  
Submitter: N. Cohen
- RTLA 663. Death adder, Acanthopis antarticus  
Material: Fifteen microscope slides  
Diagnosis: Reticulum cell sarcoma  
Submitter: L. A. Griner
- RTLA 664. Hognose snake, Heterodon platyrhinos  
Material: Fifteen microscope slides  
Diagnosis: Reticulum cell sarcoma  
Submitter: R. L. Snyder
- RTLA 665. Galaxias vulgaris  
Material: Partially dissected specimen with multiple growths in body wall; two microscope slides  
Diagnosis: Multiple infectious granulomas  
Submitter: P. M. Hine
- RTLA 666. Great sculpin, Myoxocephalus polyacanthocephalus  
Material: Four vials containing normal and pathologic samples of skin from the dorsal region of the head and the dorsolateral region below the second dorsal fin of the same specimen  
Diagnosis: Normal organ  
Submitter: J. S. Laurie
- RTLA 667. Flathead sole, Hippoglossoides elassodon  
Material: Tail of a sole with a rod-shaped growth  
Diagnosis: Epidermal papilloma  
Submitter: J. S. Laurie
- RTLA 668. Tidepool sculpin, Oligocottus maculosus  
Material: Two gross specimens with multiple grape-like clusters of growths on the dorsal region of the head  
Diagnosis: Intradermal cystic lesions consistent with gas bubble disease  
Submitter: J. S. Laurie
- RTLA 669. Lake whitefish, Coregonus clupeaformis  
Material: A piece of tissue from the posterior dorsal body cavity with a finger-like protrusion  
Diagnosis: Septate fungus with encysted spores  
Submitter: C. R. Wilson
- RTLA 670. Burbot, Lota lota  
Material: A piece of body wall  
Diagnosis: Inflammatory lesion in response to unidentified parasite material  
Submitter: G. R. Bell

- RTLA 671. Coho salmon, Oncorhynchus kisutch  
Material: Part of the body wall containing a cyst-like growth  
Diagnosis: Sarcoma  
Submitter: G. R. Bell
- RTLA 672. Luderick, Girella tricuspidata  
Material: Two slides  
Diagnosis: Toxic necrosis of kidney tubules  
Submitter: P. H. Wolf
- RTLA 673. Rainbow trout, Salmo gairdneri  
Material: One piece of tissue; two slides; six photographs  
Diagnosis: Nephroblastoma  
Submitter: P. H. Odense  
Reprint: Odense, P. H., V. H. Logan, and S. R. Baker. Spontaneous Nephroblastoma in a Rainbow Trout (Salmo gairdneri). J. Fish. Res. Board Can., 30: 549-551. 1973.
- RTLA 674. Green crab, Carcinus maenus  
Material: One gross specimen  
Diagnosis: Developmental anomaly containing loose connective tissue  
Submitter: G. W. Bane and S. Shumway
- RTLA 675. Cunner, Tautoglabrus adspersus  
Material: One gross specimen  
Diagnosis: Ameloblastic odontoma  
Submitter: G. W. Bane and S. Shumway
- RTLA 676. Goldfish, Carassius auratus  
Material: One piece of viscera; 4 slides  
Diagnosis: Granuloma  
Submitter: P. M. Hine
- RTLA 677. Atlantic menhaden, Brevoortia tyrannus  
Material: One piece of tissue  
Diagnosis: Ganglioneuroblastoma  
Submitter: J. A. Quick, Jr. and W. Kandrashoff
- RTLA 678. Striped mojarra, Diapterus plumieri  
Material: One piece of tissue; two photographs  
Diagnosis: Fibroma  
Submitter: J. A. Quick, Jr. and W. Kandrashoff
- RTLA 679. Largemouth bass, Micropterus salmoides  
Material: One piece of tissue  
Diagnosis: Lipoma  
Submitter: J. L. Gaines, Jr.
- RTLA 680. Bluegill, Lepomis macrochirus  
Material: One piece of tissue  
Diagnosis: Fibroma  
Submitter: J. L. Gaines, Jr.

- RTLA 681. Largemouth bass, Micropterus salmoides  
Material: One piece of tissue  
Diagnosis: Fibroma  
Submitter: J. L. Gaines, Jr.
- RTLA 682. Black bullhead, Ictalurus melas  
Material: One gross specimen  
Diagnosis: Cutaneous papilloma with extra chromatophores  
Submitter: J. L. Gaines, Jr.
- RTLA 683. Black bullhead, Ictalurus melas  
Material: One gross specimen  
Diagnosis: Cutaneous papilloma with extra chromatophores  
Submitter: J. L. Gaines, Jr.
- RTLA 684. Bluegill, Lepomis macrochirus  
Material: One gross specimen with multiple chalky skin lesions  
Diagnosis: Pending  
Submitter: J. L. Gaines, Jr.
- RTLA 685. Largemouth bass, Micropterus salmoides  
Material: Anterior part of one gross specimen  
Diagnosis: Multiple cutaneous fibromas and fibrosarcomas  
Submitter: J. L. Gaines, Jr.
- RTLA 686. Striped bass, Morone saxatilis  
Material: Mandible with a growth  
Diagnosis: Exostosis; possibly as a result of an old fracture  
Submitter: J. L. Gaines, Jr.
- RTLA 687. Brown trout, Salmo trutta  
Material: One piece of tissue  
Diagnosis: Chronic inflammation and scar formation  
Submitter: J. G. Hnath
- RTLA 688. Key brotula, Ogilbia cayorum  
Material: One gross specimen  
Diagnosis: Protozoan cysts  
Submitter: N. Rothman Feinberg
- RTLA 689. Northern pike, Esox lucius  
Material: One head  
Diagnosis: Fibroma  
Submitter: E. R. Brown
- RTLA 690. Walleye, Stizostedion vitreum vitreum  
Material: One head  
Diagnosis: Probable rhabdomyoma  
Submitter: E. R. Brown
- RTLA 691. Bluegill, Lepomis macrochirus  
Material: Twelve gross specimens  
Diagnosis: Tissue unsuitable for diagnosis  
Submitter: E. R. Brown

- RTLA 692. Bullhead, Ictalurus sp.  
Material: Nine gross specimens  
Diagnosis: Tissue unsuitable for diagnosis  
Submitter: E. R. Brown
- RTLA 693. Hornyhead chub, Nocomis biguttatus  
Material: One gross specimen  
Diagnosis: Hyperpigmentation in epidermis  
Submitter: E. R. Brown
- RTLA 694. Northern pike, Esox lucius  
Material: One gross specimen  
Diagnosis: Probable neoplasm; tissue unsuitable for making a definitive diagnosis  
Submitter: E. R. Brown
- RTLA 695. Yellow bullhead, Ictalurus natalis  
Material: One gross specimen; two pieces of a lesion removed from the specimen  
Diagnosis: Pigmented epidermal papilloma  
Submitter: J. C. Harshbarger and J. A. Couch
- RTLA 696. Yellow bullhead, Ictalurus natalis  
Material: One gross specimen; two pieces of a lesion removed from the specimen  
Diagnosis: Pigmented epidermal papilloma  
Submitter: J. C. Harshbarger and J. A. Couch
- RTLA 697. Chinook salmon, Oncorhynchus tshawytscha  
Material: One pathologic piece of spleen; one normal piece of spleen  
Diagnosis: Hemangioendothelioma  
Submitter: G. R. Bell
- RTLA 698. Walleye, Stizostedion vitreum vitreum  
Material: Wet tissue  
Diagnosis: Lymphocystis  
Submitter: E. R. Brown
- RTLA 699. Walleye, Stizostedion vitreum vitreum  
Material: Wet tissue  
Diagnosis: Lymphocystis  
Submitter: E. R. Brown
- RTLA 700. Steelhead rainbow trout, Salmo gairdneri  
Material: A portion of fish extending from the anterior end of the second dorsal fin to the anal opening  
Diagnosis: Cystic well-differentiated nephroblastoma  
Submitter: J. G. Hnath
- RTLA 701. Chinook salmon, Oncorhynchus tshawytscha  
Material: A growth located ventral to the kidney  
Diagnosis: Cystic well-differentiated nephroblastoma  
Submitter: J. G. Hnath

- RTLA 702. Tiger salamander, Ambystoma tigrinum  
 Material: One microscope slide; one photograph  
 Diagnosis: Epidermoid cyst containing sloughed cells  
 Submitter: F. L. Rose
- RTLA 703. Tiger salamander, Ambystoma tigrinum  
 Material: One microscope slides; one photograph  
 Diagnosis: Epidermoid cyst containing sloughed cells  
 Submitter: F. L. Rose
- RTLA 704. Tiger salamander, Ambystoma tigrinum  
 Material: One microscope slide; one photograph  
 Diagnosis: Papilloma -- noninvasive  
 Submitter: F. L. Rose
- RTLA 705. Tiger salamander, Ambystoma tigrinum  
 Material: One microscope slide; one photograph  
 Diagnosis: Probable fibroma  
 Submitter: F. L. Rose
- RTLA 706. Tiger salamander, Ambystoma tigrinum  
 Material: Two microscope slides; one photograph  
 Diagnosis: Fibroma versus myxofibroma  
 Submitter: F. L. Rose
- RTLA 707. Tiger salamander, Ambystoma tigrinum  
 Material: One microscope slide; one photograph  
 Diagnosis: Dermal melanoma  
 Submitter: F. L. Rose
- RTLA 708. Tiger salamander, Ambystoma tigrinum  
 Material: Two microscope slides; four photographs  
 Diagnosis: Probable resolving hemorrhage with breakdown and phagocytosis of red blood cells, however, endothelioma cannot be ruled out  
 Submitter: F. L. Rose
- RTLA 709. Walleye, Stizostedion vitreum vitreum  
 Material: Three sections of body wall bearing a growth  
 Diagnosis: Dermal fibroma with mottled foci of calcification  
 Submitter: J. G. Hnath
- RTLA 710. Summer flounder, Paralichthys dentatus  
 Material: A section from a growth which was located near the tip of the lower jaw medially  
 Diagnosis: Probable lipoma; tissue inadequate for definitive diagnosis  
 Submitter: R. R. Stickney
- RTLA 711. Rainbow trout, Salmo gairdneri  
 Material: Seven microscope slides  
 Diagnosis: Thymic hyperplasia including hyperplastic epidermal elements  
 Submitter: R. J. Roberts

- RTLA 712. Guppy, Poecilia reticulata  
 Material: Two partially dissected fish; one microscope slide  
 Diagnosis: Massive infestation of surface viscera by Ophryoglena (ciliated protozoan)  
 Submitter: G. E. Cosgrove
- RTLA 713. Oyster, Crassostrea virginica  
 Material: One gross specimen without shell; 6 black and white photographs; 3 microscope slides  
 Diagnosis: Focal hyperplasia of vesicular connective tissue in the mantle  
 Submitter: C. J. Dawe
- RTLA 714. Oyster, Crassostrea virginica  
 Material: One gross specimen without shell; 5 black and white photographs; 6 microscope slides  
 Diagnosis: Aberrant nodule of vesicular connective tissue; possibly a developmental anomaly  
 Submitter: C. J. Dawe
- RTLA 715. Peruvian brook trout, (probably Salvelinus fontinalis)  
 Material: Stomach and contiguous small bowel -- portions of liver and spleen are attached to the gastric cardia and the small bowel respectively by mesenteries; 13 microscope slides; 4 color transparencies; 6 black and white photographs  
 Diagnosis: Adenocarcinoma of the stomach; intussusception of stomach and carcinoma into the small bowel  
 Submitter: M. Landolt and E. Mateo
- RTLA 716. Box tortoise, Terrapene carolinensis  
 Material: Two microscope slides  
 Diagnosis: Kidney adenocarcinoma or adenosarcoma with metastases to the liver  
 Submitter: R. Ippen  
 Reprint: Ippen, R. Ein Beitrag Zu Den Spontanumoren Bei Reptilien. Verhandlungsbericht des XIV. Internationalen Symposiums Über die Erkrankungen der Zootiere (Wrocław. 1972). pp. 409-418. Akademie-Verlag, Berlin, 1972.
- RTLA 717. Greek land tortoise, Testudo hermanni  
 Material: Four microscope slides  
 Diagnosis: Lymphoblastic lymphosarcoma  
 Submitter: R. Ippen  
 Reprint: [see RTLA 716]
- RTLA 718. Ornamental tortoise, Chrysemys picta  
 Material: One microscope slide  
 Diagnosis: Parathyroid adenoma  
 Submitter: R. Ippen  
 Reprint: [see RTLA 716]



- RTLA 719. Malayan monitor, Varanus salvator  
 Material: Three microscope slides  
 Diagnosis: Lymphocytic or plasmacytic lymphoma  
 Submitter: R. Ippen  
 Reprint: [see RTLA 716]
- RTLA 720. Teju, Tupinambis rufescens  
 Material: One microscope slide  
 Diagnosis: Heptaoma  
 Submitter: R. Ippen  
 Reprint: [see RTLA 716]
- RTLA 721. Water moccasin, Agkistrodon piscivorus  
 Material: One microscope slide  
 Diagnosis: Fibroma molle  
 Submitter: R. Ippen  
 Reprint: [see RTLA 716]
- RTLA 722. Indian striate adder, Natrix stolata  
 Material: One microscope slide  
 Diagnosis: Hemangioendothelioma  
 Submitter: R. Ippen  
 Reprint: [see RTLA 716]
- RTLA 723. Atlantic salmon, Salmo salar  
 Material: One gross specimen  
 Diagnosis: Marked epithelial hyperplasia characterized by cellular atypia suggestive of carcinoma in situ  
 Submitter: M. Landolt and R. Dexter
- RTLA 724. Planarian, Dugesia dorotocephala  
 Material: Five gross specimens  
 Diagnosis: Anomalous regeneration; etiology unknown  
 Submitter: E. J. Bienen
- RTLA 725. Brown shrimp, Penaeus aztecus  
 Material: Twenty microscope slides  
 Diagnosis: Cutaneous papilloma surrounding loose connective tissue and coagulated protein (hemolymph?)  
 Submitter: D. V. Lightner  
 Reprint: Sparks, Albert K. and Donald V. Lightner. A Tumorlike Papilliform Growth in the Brown Shrimp (Penaeus aztecus). J. Invertebr. Pathol., 22(2): 203-212. 1973.
- RTLA 726. Cutthroat trout (Lahonton strain), Salmo clarki  
 Material: Three microscope slides  
 Diagnosis: Advanced hepatoma  
 Submitter: C. E. Smith
- RTLA 727. Anolis sp.  
 Material: One gross specimen with lesions on tail and left hindleg  
 Diagnosis: Bacterial granuloma  
 Submitter: H. A. Fehlmann

- RTLA 728A. & B. Japanese beetle, Popillia japonica  
Material: Two gross specimens  
Diagnosis: Septate fungus  
Submitter: D. A. Chittick
- RTLA 729. Rhinoceros viper, Bitis nasicornis  
Material: The head and two additional pieces of tissue  
Diagnosis: Conjunctival inclusion cysts versus congenital infection  
Submitter: J. E. Cooper
- RTLA 730. Walleye, Stizostedion vitreum vitreum  
Material: One gross specimen  
Diagnosis: Pending  
Submitter: E. R. Brown
- RTLA 731. Walleye, Stizostedion vitreum vitreum  
Material: One gross specimen  
Diagnosis: Lymphocystis  
Submitter: E. R. Brown
- RTLA 732. Walleye, Stizostedion vitreum vitreum  
Material: One gross specimen  
Diagnosis: Lymphocystis probably associated with dermal sarcoma  
Submitter: E. R. Brown
- RTLA 733. Northern pike, Esox lucius  
Material: One gross specimen  
Diagnosis: Pending  
Submitter: E. R. Brown
- RTLA 734. Walleye, Stizostedion vitreum vitreum  
Material: One gross specimen  
Diagnosis: Lymphocystis  
Submitter: E. R. Brown
- RTLA 735. Walleye, Stizostedion vitreum vitreum  
Material: One gross specimen  
Diagnosis: Lymphocystis  
Submitter: E. R. Brown
- RTLA 736. Walleye, Stizostedion vitreum vitreum  
Material: One gross specimen  
Diagnosis: Lymphocystis  
Submitter: E. R. Brown
- RTLA 737. Bass  
Material: One gross specimen  
Diagnosis: Scoliosis  
Submitter: E. R. Brown
- RTLA 738. Northern pike, Esox lucius  
Material: One gross specimen  
Diagnosis: Probable neoplasm; preservation insufficient for  
conclusive determination  
Submitter: E. R. Brown

- RTLA 739. Walleye, Stizostedion vitreum vitreum  
Material: One gross specimen  
Diagnosis: Lymphocystis  
Submitter: E. R. Brown
- RTLA 740. Walleye, Stizostedion vitreum vitreum  
Material: One gross specimen  
Diagnosis: Lymphocystis  
Submitter: E. R. Brown
- RTLA 741. Walleye, Stizostedion vitreum vitreum  
Material: One gross specimen  
Diagnosis: Dermal sarcoma  
Submitter: E. R. Brown
- RTLA 742. Walleye, Stizostedion vitreum vitreum  
Material: One gross specimen  
Diagnosis: Lymphocystis associated with dermal sarcoma  
Submitter: E. R. Brown
- RTLA 743. Northern pike, Esox lucius  
Material: One gross specimen  
Diagnosis: Hematopoietic neoplasm  
Submitter: E. R. Brown
- RTLA 744. Walleye, Stizostedion vitreum vitreum  
Material: One gross specimen  
Diagnosis: Lymphocystis  
Submitter: E. R. Brown
- RTLA 745. Walleye, Stizostedion vitreum vitreum  
Material: One gross specimen  
Diagnosis: Probable dermal sarcoma  
Submitter: E. R. Brown
- RTLA 746. Bass  
Material: One gross specimen  
Diagnosis: Multiple bacterial granulomas  
Submitter: E. R. Brown
- RTLA 747. Walleye, Stizostedion vitreum vitreum  
Material: One gross specimen  
Diagnosis: Lymphocystis  
Submitter: E. R. Brown
- RTLA 748. Northern pike, Esox lucius  
Material: One piece of body wall  
Diagnosis: Nephroblastoma  
Submitter: E. R. Brown
- RTLA 749. Walleye, Stizostedion vitreum vitreum  
Material: One gross specimen  
Diagnosis: Dermal sarcoma  
Submitter: E. R. Brown

- RTLA 750. Bullhead, Ictalurus sp.  
Material: One gross specimen  
Diagnosis: Papilloma  
Submitter: G. G. Combs
- RTLA 751. Bullhead, Ictalurus sp.  
Material: One gross specimen  
Diagnosis: Papilloma  
Submitter: G. G. Combs
- RTLA 752. Bullhead, Ictalurus sp.  
Material: One gross specimen  
Diagnosis: Papilloma  
Submitter: G. G. Combs
- RTLA 753. Bullhead, Ictalurus sp.  
Material: One gross specimen  
Diagnosis: Papilloma  
Submitter: G. G. Combs
- RTLA 754. Bullhead, Ictalurus sp.  
Material: One gross specimen  
Diagnosis: Papilloma  
Submitter: G. G. Combs
- RTLA 755. Bullhead, Ictalurus sp.  
Material: One gross specimen  
Diagnosis: Papilloma  
Submitter: G. G. Combs
- RTLA 756. American toad, Bufo americanus  
Material: Four toads with lesions randomly scattered on the ventral surface of each animal  
Diagnosis: Probably due to parasites  
Submitter: G. Gentry
- RTLA 757. Australian rock oyster, Crassostrea commercialis  
Material: One microscope slide  
Diagnosis: Haplosporidan and helminth parasites  
Submitter: P. H. Wolf
- RTLA 758. Australian rock oyster, Crassostrea commercialis  
Material: One microscope slide  
Diagnosis: Tylocephalum (?) sp.  
Submitter: P. H. Wolf
- RTLA 759A. & B. African walking catfish  
Material: Two microscope slides; 2 black and white photographs  
Diagnosis: Hemangioma (RTLA 759A); Dermal fibroma (RTLA 759B)  
Submitter: I. Paperna
- RTLA 760. Electric catfish, Malapterurus electricus  
Material: Two microscope slides; 2 paraffin blocks; one black and white photograph  
Diagnosis: Epithelioma -- on lips, head and flanks  
Submitter: I. Paperna

- RTLA 761. Cichlid, Haplochromis ismaeli  
Material: One microscope slide; 2 black and white photographs  
Diagnosis: Lipoma - subcutaneous  
Submitter: I. Paperna
- RTLA 762. Mummichog, Fundulus heteroclitus  
Material: Two microscope slides; 2 black and white photographs  
Diagnosis: fibro-epithelioma of the skin  
Submitter: I. Paperna
- RTLA 763. Ulua, Carangoides ajax (white ulua) or C. equula (ulua)  
Material: Body serosa with worms  
Diagnosis: Pleurocercoid larvae of a tapeworm  
Submitter: A. C. Smith
- RTLA 764. Black tip shark, Carcharhinus melanopterus  
Material: Normal and mottled liver  
Diagnosis: Fatty Liver  
Submitter: A. C. Smith and R. L. Taylor
- RTLA 765. Rainbow trout, Salmo gairdneri  
Material: One gross specimen; 3 microscope slides  
Diagnosis: Nephroblastoma  
Submitter: D. Woronecki
- RTLA 766. Brown bullhead, Ictalurus nebulosus  
Material: One gross specimen  
Diagnosis: Epidermal papilloma  
Submitter: J. L. Gaines, Jr.
- RTLA 767. Australian rock oyster, Crassostrea commercialis  
Material: One microscope slide  
Diagnosis: Hematopoietic neoplasm  
Submitter: P. H. Wolf
- RTLA 768. Australian rock oyster, Crassostrea commercialis  
Material: Four microscope slides; 2 black and white photographs  
Diagnosis: Infected with ciliate protozoans  
Submitter: P. H. Wolf
- RTLA 769. Jewfish, Sciaenidae autarctica  
Material: Four pieces of wet tissue  
Diagnosis: Pending  
Submitter: P. H. Wolf
- RTLA 770. White hake, Urophycis tenuis  
Material: Dorsal fin with adjacent growth  
Diagnosis: Fibrosarcoma  
Submitter: M. W. Newman
- RTLA 771. Pacific oyster, Crassostrea gigas  
Material: One gross specimen  
Diagnosis: Pedunculated vesiculo-epithelial polyp of the mantle  
Submitter: J. G. Denison

- RTLA 772. Rainbow trout, Salmo gairdneri  
Material: A piece of a kidney tumor; 4 microscope slides  
Diagnosis: Nephroblastoma  
Submitter: C. E. Smith
- RTLA 773. Spring or chinook salmon, Oncorhynchus tshawytscha  
Material: Three microscope slides  
Diagnosis: Lymphoma  
Submitter: G. R. Bell
- RTLA 774. Spot-tail shiner, Notropis hudsonius  
Material: A growth found lying freely in the body cavity  
Diagnosis: Vascularized tissue adjacent to or part of ovary  
containing sporozoan parasites  
Submitter: D. J. Klemm
- RTLA 775. Sinai desert cobra, Walterinnesia aegyptia  
Material: Two pieces of kidney tissue  
Diagnosis: Non-caseating granuloma similar to sarcoidosis, but not  
showing Schaumann bodies  
Submitter: E. Elkan
- RTLA 776. Croaker  
Material: A grossly enlarged vertebral spine  
Diagnosis: Exostosis  
Submitter: K. Holland
- RTLA 777. Yellow perch, Perca flavescens  
Material: A wedge of tissue removed from a large mass which  
was found free in the body cavity  
Diagnosis: Fibroma  
Submitter: A. Cook
- RTLA 778. Indigo snake, Drymarchon corais couperi  
Material: Four microscope slides  
Diagnosis: Narcotizing enteritis  
Submitter: E. A. Holzinger
- RTLA 779. Largemouth bass, Micropterus salmoides  
Material: One gross specimen  
Diagnosis: Well-differentiated lipoma  
Submitter: J. L. Gaines, Jr.
- RTLA 780. Largemouth bass, Micropterus salmoides  
Material: Spleen  
Diagnosis: Mesenteric lipoma adjacent to spleen  
Submitter: J. L. Gaines, Jr.
- RTLA 781. Rainbow trout, Salmo gairdneri  
Material: One microscope slide  
Diagnosis: Granuloma  
Submitter: B. L. Munday
- RTLA 782. Spot, Leiostomus xanthurus  
Material: A piece of tissue with part of a growth  
Diagnosis: Microsporidia infection; Pleistophora sp.  
Submitter: R. M. Overstreet

- RTLA 783. Rainbow trout, Salmo gairdneri  
Material: Three microscope slides  
Diagnosis: Mycobacterial granuloma  
Submitter: B. L. Munday
- RTLA 784. Morelet's crocodile, Crocodylus moreletii  
Material: One crocodile  
Diagnosis: Anasarca associated with malnutrition  
Submitter: R. H. Hunt
- RTLA 785. Morelet's crocodile, Crocodylus moreletii  
Material: One crocodile  
Diagnosis: Anasarca associated with malnutrition  
Submitter: R. H. Hunt
- RTLA 786. Spectacled caiman, Caiman crocodilus  
Material: One crocodile  
Diagnosis: Normal (control)  
Submitter: R. H. Hunt
- RTLA 787. Black tetra, Gymnocorymbus ternetzi  
Material: One fish  
Diagnosis: Pending  
Submitter: M. E. Rice and T. C. Smith
- RTLA 788. Atlantic cod, Gadus morhua  
Material: Ventro-posterior edge of the opercular area with a sub-epidermal, firm, growth  
Diagnosis: Fibroma  
Submitter: J. S. Laurie
- RTLA 789. Spring-tail lizard, Uromastix acanthinurus  
Material: Material excised from a large swelling on the left hind foot  
Diagnosis: Bacterial granuloma  
Submitter: R. Crombie
- RTLA 790. Cunner, Tautoglabrus adspersus  
Material: One gross specimen  
Diagnosis: Pending  
Submitter: S. Shumway
- RTLA 791. Tiger salamander, Ambystoma tigrinum  
Material: One microscope slide; one color transparency  
Diagnosis: Dermal melanocytoma  
Submitter: F. L. Rose
- RTLA 792. Tiger salamander, Ambystoma tigrinum  
Material: One microscope slide; one color transparency  
Diagnosis: Dermal myxofibroma  
Submitter: F. L. Rose
- RTLA 793. Bluegill, Lepomis microchirus  
Material: One gross specimen  
Diagnosis: Cutaneous melanoma  
Submitter: J. M. Barkuloo

- RTLA 794. Sydney rock oyster, Crassostrea commercialis  
Material: One microscope slide; 2 color transparencies  
Diagnosis: Unabsorbed spermatc tubules (associated with sex reversal)  
Submitter: P. H. Wolf
- RTLA 795. Brown trout, Salmo trutta  
Material: One microscope slide  
Diagnosis: Leiomyoma  
Submitter: C. E. Smith
- RTLA 796. Largemouth bass, Micropterus salmoides  
Material: One microscope slide  
Diagnosis: Cystic mesothelioma  
Submitter: C. E. Smith
- RTLA 797. Golden trout, Salmo aguabonita  
Material: One microscope slide  
Diagnosis: Fibroepithelioma of the skin  
Submitter: C. E. Smith
- RTLA 798. Boa constrictor, Boa constrictor  
Material: One gross specimen  
Diagnosis: Fecal impaction  
Submitter: I. Gorman
- RTLA 799. Walleye, Stizostedion vitreum vitreum  
Material: One gross specimen; 2 electron photomicrographs  
Diagnosis: Dermal sarcoma  
Submitter: W. E. Ribelin
- RTLA 800. Sauger, Stizostedion canadense  
Material: One gross specimen  
Diagnosis: Lipid granulomas within hyperplastic abdominal depot fat  
Submitter: J. G. Hnath and D. Tomljanovich
- RTLA 801. Sauger, Stizostedion candense  
Material: One gross specimen  
Diagnosis: Lipid granulomas within hyperplastic abdominal depot fat  
Submitter: J. G. Hnath and D. Tomljanovich
- RTLA 802. Red-spotted newt, Notophthalmus viridescens  
Material: One gross specimen  
Diagnosis: Gram negative bacterial infection  
Submitter: G. Gentry
- RTLA 803. Brown trout, Salmo trutta  
Material: Liver and associated growth  
Diagnosis: Nephroblastoma  
Submitter: P. M. Hine
- RTLA 804. Nile monitor, Varanus niloticus  
Material: One paraffin block  
Diagnosis: Heterotopic bone formation ("Myositis ossificans")  
Submitter: E. Elkan



- RTLA 805. Sphaerodactylus a. argus  
 Material: One gross specimen  
 Diagnosis: Parasitic cyst  
 Submitter: R. Crombie
- RTLA 806. Anolis garmani  
 Material: One gross specimen  
 Diagnosis: Bullet embedded under skin  
 Submitter: R. Crombie
- RTLA 807. Striped mullet, Mugil cephalus  
 Material: Five microscope slides; 4 black and white photographs  
 Diagnosis: Fibroma with areas of ossification  
 Submitter: D. V. Lightner
- RTLA 808. Muskellunge, Esox masquinongy  
 Material: Fifteen slides  
 Diagnosis: Lymphosarcoma  
 Submitter: R. Sonstegard
- RTLA 809. Leopard frog, Rana pipiens  
 Material: Research material including 163 microscope slides, 111 paraffin blocks, 50 slidestrips, 21 Kodachrome transparencies, reprints of 8 papers and two log books demonstrating renal adenocarcinoma  
 Submitter: G. S. King  
 Reprints: King, Gladys S. Evidence of a Biochemical Lesion Stage in Advance of Frog Tumor Formation. Ann. N. Y. Acad. Sci., 126(1): 222-236. 1965.  
 King, Gladys S. Heterochromatic Cells During the Frog Tumor Process. Am. Zool., 9(4): 1125. 1969. (Abstr.).
- RTLA 810. Bullsnaek, Pituophis catenifer  
 Material: Four microscope slides  
 Diagnosis: Pigmented spindle-cell sarcoma; possibly of peripheral nerve origin  
 Submitter: G. Migaki
- RTLA 811. Goeduck, Panope generosa  
 Material: One paraffin block containing a cyst on a siphon  
 Diagnosis: Abscess  
 Submitter: G. B. Pauley
- RTLA 812. Chinook salmon, Oncorhynchus tshawytscha  
 Material: Two paraffin blocks containing gills with small white cysts  
 Diagnosis: Parasitized by Dermocystidium  
 Submitter: G. B. Pauley  
 Reprint: Pauley, Gilbert B. Prespawning Adult Salmon Mortality Associated with a Fungus of the Genus Dermocystidium. J. Fish. Res. Bd. Can., 24(4): 843-848. 1967.

- RTLA 813. Rainbow trout, Salmo gairdneri  
 Material: Two paraffin blocks  
 Diagnosis: Hepatoma  
 Submitter: G. B. Pauley
- RTLA 814. Shipworm, Teredo sp. (fossil specimen)  
 Material: A polished section of conifer wood containing the borings and pellets of Teredo and a petrified Teredo body  
 Diagnosis: No neoplastic involvement; the specimen will serve to demonstrate the possibility of finding a neoplasm in an invertebrate fossil  
 Submitter: J. A. Tuta
- RTLA 815. Pacific oyster, Crassostrea gigas  
 Material: Four paraffin blocks  
 Diagnosis: Parasitized by Protista incertae sedis  
 Submitter: G. B. Pauley  
 Reprint: Becker, C. Dale and Gilbert B. Pauley. An Ovarian Parasite (Protista incertae sedis) from the Pacific Oyster, Crassostrea gigas. J. Invertebr. Pathol., 12: 425-437. 1968.
- RTLA 816. Freshwater mussel, Gonidea angulata  
 Material: One paraffin block  
 Diagnosis: Parasitized by the trematode, Aspidogaster conchicola  
 Submitter: G. B. Pauley  
 Reprint: Pauley, Gilbert B. and C. Dale Becker. Aspidogaster conchicola in Mollusks of the Columbia River System with Comments on the Host's Pathological Response. J. Parasitol., 54(4): 917-920. 1968.
- RTLA 817. Painted turtle, Chrysemys picta  
 Material: Two paraffin blocks  
 Diagnosis: Two ulcers in the stomach and one in the duodenum  
 Submitter: G. B. Pauley  
 Reprint: Pauley, Gilbert B. and Douglas L. Robberson. A Painted Turtle (Chrysemys picta) with Ulcers in the Stomach and Duodenum. Northwest Sci., 40(2): 79-82. 1966.
- RTLA 818. Butter clam, Saxidomus giganteus  
 Material: Four paraffin blocks  
 Diagnosis: Abscesses  
 Submitter: G. B. Pauley
- RTLA 819. Coho salmon, Oncorhynchus kisutch  
 Material: A wedge of tissue removed from a growth located on the dorsal side of the fish just caudal to the head; one color photograph  
 Diagnosis: Fibroma  
 Submitter: G. Hoskins

- RTLA 820. Marbled salamander, Ambystoma opacum  
 Material: Encapsulated tumor about 1/2 cm sphere removed from the neck near the area of jaw proximal; 4 slides; 1 paraffin block; 6 photographs  
 Diagnosis: Non-invasive Leydig cell neoplasm  
 Submitter: C. T. Wilson
- RTLA 821A. & B. Striped mullet, Mugil cephalus  
 Material: Four slides; 3 photographs  
 Diagnosis: Ossifying fibroma  
 Submitter: D. V. Lightner
- RTLA 822. Rainbow trout, Salmo gairdneri  
 Material: One-half of a growth; 4 photographs; 4 negatives  
 Diagnosis: Pending  
 Submitter: P. M. Hine
- RTLA 823. Sauger, Stizostedion canadense  
 Material: One gross specimen with a growth posterior to the left eye and a small, slightly raised lesion on the right lateral side; one color transparency  
 Diagnosis: Ossifying fibroma  
 Submitter: D. Tomljanovich
- RTLA 824. English sole, Parophrys vetulus  
 Material: One gross specimen with a large growth posterior to the head between the lateral line and dorsal fin on the eyed-side  
 Diagnosis: Papilloma  
 Submitter: N. P. Boyce
- RTLA 825. Brown bullhead, Ictalurus nebulosus  
 Material: One gross specimen  
 Diagnosis: Epidermal carcinoma  
 Submitter: J. C. Harshbarger and G. G. Combs
- RTLA 826. Brown bullhead, Ictalurus nebulosus  
 Material: One gross specimen  
 Diagnosis: Epidermal hyperplasia overlying dermal fat deposit  
 Submitter: J. C. Harshbarger and G. G. Combs
- RTLA 827. Brown bullhead, Ictalurus nebulosus  
 Material: One gross specimen  
 Diagnosis: Papilloma  
 Submitter: J. C. Harshbarger and G. G. Combs
- RTLA 828. Brown bullhead, Ictalurus nebulosus  
 Material: One gross specimen  
 Diagnosis: Inflammatory lesion with hyperpigmentation  
 Submitter: J. C. Harshbarger
- RTLA 829. Florida gar, Lepisosteus platyrhincus  
 Material: One gross specimen  
 Diagnosis: Pending  
 Submitter: J. C. Harshbarger and G. G. Combs

- RTLA 830. Yellow bullhead, Ictalurus natalis  
Material: One gross specimen  
Diagnosis: Papilloma  
Submitter: J. C. Harshbarger and G. G. Combs
- RTLA 831. Brown bullhead, Ictalurus nebulosus  
Material: One gross specimen  
Diagnosis: Inflammatory lesion  
Submitter: J. C. Harshbarger and G. G. Combs
- RTLA 832. Brown bullhead, Ictalurus nebulosus  
Material: One gross specimen  
Diagnosis: Papillary hyperplasia versus papilloma  
Submitter: J. C. Harshbarger and G. G. Combs
- RTLA 833. Brown bullhead, Ictalurus nebulosus  
Material: One gross specimen  
Diagnosis: Papillary hyperplasia versus papilloma  
Submitter: J. C. Harshbarger and G. G. Combs
- RTLA 834. Brown bullhead, Ictalurus nebulosus  
Material: One fish head  
Diagnosis: Papilloma  
Submitter: J. C. Harshbarger and G. G. Combs
- RTLA 835. Brown bullhead, Ictalurus nebulosus  
Material: One fish head  
Diagnosis: Papilloma  
Submitter: J. C. Harshbarger and G. G. Combs
- RTLA 836. Brown bullhead, Ictalurus nebulosus  
Material: One fish head  
Diagnosis: Subdermal or intradermal fat deposit  
Submitter: J. C. Harshbarger and G. G. Combs
- RTLA 837. Brown bullhead, Ictalurus nebulosus  
Material: One gross specimen  
Diagnosis: Pigmented papillary hyperplasia  
Submitter: J. C. Harshbarger and G. G. Combs
- RTLA 838. Brown bullhead, Ictalurus nebulosus  
Material: One gross specimen  
Diagnosis: Papilloma  
Submitter: J. C. Harshbarger and G. G. Combs
- RTLA 839. Yellow bullhead, Ictalurus natalis  
Material: One gross specimen  
Diagnosis: Nevus  
Submitter: J. C. Harshbarger and G. G. Combs
- RTLA 840. Brown bullhead, Ictalurus nebulosus  
Material: One fish head  
Diagnosis: Pigmented papillary hyperplasia  
Submitter: J. C. Harshbarger and G. G. Combs

- RTLA 841. Brown bullhead, Ictalurus nebulosus  
Material: One fish head  
Diagnosis: Enlarged taste papillae  
Submitter: J. C. Harshbarger and G. G. Combs
- RTLA 842. Turbot, Rhombus maximus  
Material: One slide; 3 blocks  
Diagnosis: Malignant lymphoma  
Submitter: J. Nightingale
- RTLA 843. Northern pike, Esox lucius  
Material: Twenty slides  
Diagnosis: Exuberant overgrowth of fibrous tissue in response  
to a probable injury  
Submitter: W. Lampert
- RTLA 844-887. Oyster, Crassostrea virginica  
Material: Forty-three slides  
Diagnosis: Hematopoietic neoplasms  
Submitter: E. M. Frierman

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Gray snapper	485
Great sculpin	666
Greater wax moth	28
Greek land tortoise	717
Green crab	674
Green turtle	12, 121, 651
Gudgeon	219
Guppy	66, 75, 199, 247, 276, 466, 607, 712, 787

H

Haddock

519

RTLA NO.

Half-toed gecko	240
<u>Haplochromis ismaeli</u>	761
<u>Heliothis zea</u>	180, 184
Hellbender	233
<u>Hemerocampa pseudotsugata</u>	438
<u>Hemidactylus frenatus</u>	240
<u>Hermisenda crossicornis</u>	64
Hermit crab	352, 483
<u>Heterocentrotus mammillatus</u>	236
<u>Heterodon platyrhinos</u>	664
<u>Hippocampus</u> sp.	42
<u>Hippoglossoides elassodon</u>	413, 415, 417, 426, 427, 667
Hogchoker	609
Hognose snake	664
<u>Homo sapiens</u>	433A
Hooked mussel	329
Hornyhead chub	693
Horseshoe crab	336, 370
House fly	65, 90
<u>Hydrolagus colliei</u>	265, 417
<u>Hydrosaurus amboinensis</u>	291
<u>Hyla caerulea</u>	410
<u>Hymenochirus boettgeri</u>	327, 419, 420

I

<u>Ictalurus</u> sp.	129, 583, 597, 692, 750-755
<u>Ictalurus catus</u>	613
<u>Ictalurus melas</u>	682, 683
<u>Ictalurus natalis</u>	290, 386, 387, 390, 397, 406, 468-471, 582, 584, 620, 621, 695, 696, 830, 839
<u>Ictalurus punctatus</u>	277, 575
Ide	516
<u>Iguana iguana</u>	179, 234, 460
<u>Ilyophis brunneus</u>	565
Indian striate adder	722
Indigo snake	231, 778

J

Japanese beetle	728A & B
Jellyfish	360, 367
Jewfish	769

K

Kahawai	648
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RTLA NO.

Key brotula	688
Keyhole cichlid	511
Khapra beetle	45
Killifish	512
King crab	50

L

<u>Labeo bicolor</u>	98
<u>Lacerta viridis</u>	482
<u>Lagodon rhomboides</u>	343
Lake trout	514
Lake whitefish	669
<u>Lampetra lamottei</u>	84
<u>Lampropeltis getulus</u>	478
Larch sawfly	188, 196
Largemouth bass	14-16, 679, 681, 685, 779, 780, 796
Largescale sucker	118
Largetooth sawfish	546
Leafhopper	44
<u>Leiostomus xanthurus</u>	103, 422, 782
Leopard frog	41, 60, 172, 278, 279, 282, 408, 435, 456, 487-492, 577, 656-660, 809
Lightning bug	128
<u>Limulus polyphemus</u>	50, 336, 370
<u>Linckia multifora</u>	442
Lingcod	106, 254, 652
<u>Liophis</u> sp.	548
Littleneck clam	155
<u>Locusta migratoria</u>	68
Longhorn sculpin	445, 446
Longnose gar	603
Longnose sucker	213
<u>Lota lota</u>	670
Luderick	672
<u>Lumbricus</u> sp.	80, 104, 169, 250, 252, 262, 287
<u>Lumbricus terrestris</u>	2, 33, 158, 579, 615-619
<u>Lutjanus griseus</u>	485

M

<u>Macracanthorhynchus hirudinaceus</u>	293
Madeira cockroach	69
<u>Madrepora kauaiensis</u>	54
<u>Malapterurus electricus</u>	760

	RTLA NO.
Malayan monitor	461, 719
Manure worm	581
Marbled salamander	577, 820
<u>Margaritifera margaritifera</u>	137-139, 146
Mediterranean flour moth	192
<u>Melanogrammus aeglefinus</u>	519
<u>Melelontha</u> sp.	187, 189
<u>Mercenaria mercenaria</u>	421
<u>Merlangius merlangus</u>	521
<u>Metynnis maculatus</u>	57
Mexican axolotl	506
<u>Micropterus dolomieu</u>	156
<u>Microstomus pacificus</u>	264, 496, 497, 824
<u>Micropterus salmoides</u>	14-16, 679, 681, 685, 779, 780, 796
<u>Micrurus fulvius fulvius</u>	167
Moon snail	76
Morelet's crocodile	784, 785
<u>Morone americana</u>	600, 601
<u>Morone saxatilis</u>	6, 292, 686
Mosquito	285
Mountain pine beetle	123
Mud clam	5, 115
Mud puppy	97
<u>Mugil cephalus</u>	807, 812A & B
Mummichog	204, 222, 762
<u>Musca domestica</u>	65, 90
Muskellunge	808
<u>Mya arenaria</u>	5, 115, 147
<u>Myoxocephalus octodecemspinosus</u>	445, 446
<u>Myoxocephalus polyacanthocephalus</u>	666
<u>Mytilus californianus</u>	20
<u>Mytilus edulis</u>	235
<u>N</u>	
<u>Naja naja</u>	117, 556-561
<u>Natrix stolata</u>	722
<u>Necturus maculosus</u>	97
Neotropical race runner	130
<u>Nereis</u> (?) sp.	
Nile monitor lizard	632, 635, 804
<u>Nocomis biguttatus</u>	693
Northern pike	112, 127, 623A & B, 640, 644, 647, 689, 694, 733, 738, 743, 748, 843
<u>Nosema juli</u> n. sp.	484
<u>Notophthalmus viridescens</u>	67, 232, 272, 448, 501, 534, 661A & B, 662, 802
<u>Notropis hudsonius</u>	774
Nudibranch	64

RTLA NO.

Nyctimystes daymanio  
Nyctimystes kubori

412  
 411

O

Octopus vulgaris  
Ogcocephalus nasutus  
Ogilbia cavorum  
Oligocottus maculosus  
Oncorhynchus kisutch

19  
 593  
 688  
 668  
 105, 197, 203, 258, 261,  
 268, 283, 284, 286, 430,  
 440, 450-454, 530, 533,  
 574, 580, 595A & B, 671, 819

Oncorhynchus masou ishikawae  
Oncorhynchus nerka  
Oncorhynchus rhodurus f. macrostomus  
Oncorhynchus tshawytscha

572  
 202, 242, 653  
 570, 571  
 248, 259, 423, 526, 697,  
 701, 773, 812

Ophiodon elongatus  
Orconectes rusticus  
 Ornamental tortoise  
Oryctes nasicornis  
Oryctes rhinoceros  
Ostrinia nubilalis

106, 254, 652  
 79, 280  
 718  
 194  
 193, 195  
 43

P

Pacific cod  
 Pacific electric ray  
 Pacific hagfish  
 Pacific oyster

157  
 494  
 295  
 37, 108, 153, 154, 215,  
 225, 771, 815

Paddlefish  
Pagurus sp.  
 Painted turtle  
Palaemon sp.  
Palaemonetes pugio  
Panope americana  
Panope generosa  
Papilio glaucus  
Paralichthys dentatus  
Parophrys vetulus  
 Patagonian shorefish  
 Pecan weevil  
 Pen shell  
Penaeus aztecus  
Penaeus setiferus  
 Pencilfish  
Perca flavescens

463  
 352  
 34, 94, 817  
 208  
 17  
 542-545  
 811  
 637  
 710  
 165, 425  
 476  
 563, 564  
 353  
 126, 209, 725  
 210  
 432  
 777



RTLA NO.

<u>Peridroma saucia</u>	47, 48
<u>Periplaneta americana</u>	56
<u>Petromyzon marinus</u>	29, 89
<u>Photuris</u> sp.	128, 251
<u>Phyllomedusa trinitatis</u>	409
<u>Physa heterostrophia</u>	35
Pilot black snake	125
<u>Pinctada margaritifera</u>	538
Pinfish	343
<u>Pituophis catenifer</u>	810
<u>Placobdella parasitica</u>	437
Plaice	522, 528, 529
<u>Planaria dactyligera musculosa</u>	270, 477, 477A
Planarian	1, 30, 102, 119, 159, 245, 477, 477A, 578, 724
<u>Platichthys stellatus</u>	504, 505
<u>Pleuronectes platessa</u>	522, 528, 529
<u>Poecilia</u> sp.	493
<u>Poecilia reticulata</u>	66, 75, 199, 247, 276, 466, 607, 712
<u>Poecilobrycon harrisoni</u>	432
<u>Polinices lewisii</u>	76
<u>Polyodon spathula</u>	463
<u>Pomatomus saltatrix</u>	444
<u>Pomoxis nigromaculatus</u>	101
Pond snail	35
<u>Popillia japonica</u>	728A & B
Praying mantis	211, 274
<u>Prionus imbricornis</u>	531, 598
<u>Pristiphora erichsonii</u>	188, 196
<u>Pristis perotteti</u>	546
<u>Procambarus clarkii</u>	59, 562
<u>Python molurus</u>	441
 <u>Q</u>	
Quahog	421
Queenfish	53
 <u>R</u>	
Rainbow trout	25, 77, 217, 296-302, 304, 306-326, 464, 527, 566-568, 590, 592, 622, 629, 630, 673, 711, 765, 772, 781, 783, 813, 822
<u>Raja radiata</u>	636
Ramirez's dwarf cichlid	166

RTLA NO.

<u>Rana catesbeiana</u>	73, 205, 380
<u>Rana montezumae</u>	207
<u>Rana palustris</u> x <u>pipiens</u>	403
<u>Rana pipiens</u>	41, 60, 172, 278, 279, 282, 408, 435, 456, 487-492, 577, 656-660, 809
Ratfish	265, 416
Red-eared turtle	201
Red grouper	362, 363, 366
Red-spotted newt	67, 232, 272, 448, 501, 534, 577, 661A & B, 662, 802
Redtailed black shark	98
Rhinoceros beetle	193, 195
Rhinoceros viper	379, 508, 729
<u>Rhombus maximus</u>	842
River Jack	508
Roach	221
"Robalo"	476
Rock (stone?) crab	335
<u>Rutilus rutilus</u>	221

S

Sail lizard	291
<u>Salmo aguabonita</u>	797
<u>Salmo clarki</u>	267, 726
<u>Salmo gairdneri</u>	25, 77, 217, 296-302, 304, 306-326, 464, 527, 566-568, 590, 592, 622, 629, 630, 673, 700, 711, 765, 772, 781, 783, 813, 822
<u>Salmo salar</u>	431, 589, 723
<u>Salmo trutta</u>	518, 687, 795, 803
Saltmarsh caterpillar	185
<u>Salvelinus fontinalis</u>	216, 303, 715
<u>Salvelinus miyabei</u> x <u>S. fontinalis</u>	573
<u>Salvelinus namaycush</u>	514
Sandbar shark	523, 524
Sand dollar	341
Sauger	800, 801, 823
<u>Saxidomus giganteus</u>	92, 136, 818
Scallop	569
<u>Sceloporus occidentalis</u>	87
<u>Sciara antarctica</u>	769
<u>Scomberomorus maculatus</u>	373-375
Sea anemone	359
Sea hare	168, 237, 344, 355-358, 365, 368
Seahorse	42
Sea lamprey	29, 89

RTLA NO.

Sea morid	520
Sea squirt	337
Sea urchin test	83
<u>Sebastes crameri</u>	253
<u>Sebastes diploproa</u>	61
<u>Seriphus politus</u>	53
Sheepshead	331, 333, 334, 370, 377, 649
Sheepshead minnow	536
Shipworm	814
Shortnose batfish	593
<u>Sicyogaster maeandricus</u>	414
Silkworm	85, 183, 190
Silver dollar	57
Sinai desert cobra	775
<u>Sitophilus granarius</u>	46
Skipjack tuna	122, 170
Slatepencil urchin	236
Smallmouth bass	156
Smooth Washington clam	92, 136, 818
Snapping turtle	74
Sockeye salmon	202, 242, 653
Soft-shell clam	147
South American gartersnake	548
South American red-eared turtle	271
Spanish mackerel	373-375
Spectacled caiman	786
<u>Sphaerodactylus a. argus</u>	805
Spiny-headed worm	293
<u>Spisula solidissima</u>	294
Splitnose rockfish	61
Spot	103, 422, 782
Spot-tail shiner	774
Spotted eel	338
Spotted metynnis	57
Spring salmon	773
Spring-tail lizard	789
Spruce budworm	78
Spruce sawfly	27
Square-marked toad	418
Staghorn coral	436, 599, 604-606
Starry flounder	504, 505
Steelhead rainbow trout	700
<u>Stizostedion canadense</u>	800, 801, 823
<u>Stizostedion vitreum vitreum</u>	22, 93, 163, 164, 525, 612, 624-627, 638, 641-643, 690, 698, 699, 709, 730-732, 734-736, 739-742, 744, 745, 747, 749, 799
Striped bass	6, 292, 686
Striped mojarra	596, 678

RTLA NO.

Striped mullet	807, 821A & B
<u>Strombus gigas</u>	110
<u>Strongylura marina</u>	18
<u>Strophitus undulatus</u>	244
Sugar trout	332
Summer flounder	710
Surf clam	294
Sydney rock oyster	107, 151, 152, 160-162, 223, 794
<u>Symphysodon discus</u>	178

T

<u>Tautogolabrus adspersus</u>	550-553, 675, 790
Teju	720
<u>Teredo</u> sp.	814
<u>Terrapene carolina</u>	113, 509, 716
<u>Testudo hermanni</u>	717
<u>Thamnophis sirtalis</u>	95, 634
Thorny skate	636
Tidepool sculpin	668
Tiger python	441
Tiger salamander	702-708, 791, 792
Tiger swallowtail	637
Tilehorned prionus	531, 598
Timber rattlesnake	275, 378, 486
<u>Tipula paludosa</u>	191
Tokay gecko	424
<u>Torpedo californica</u>	494
<u>Trachinotus carolinus</u>	500
<u>Tresus nuttalli</u>	21
<u>Trichogaster trichopterus</u>	91
<u>Trichoplusia ni</u>	181
<u>Trinectes maculatus</u>	609
Trinidad leaf frog	409
<u>Trionyx ferox</u>	654
<u>Triturus alpestris</u>	70, 591
<u>Trogoderma granarium</u>	45
<u>Tupinambis rufescens</u>	720
Turbot	842
Two-flapped chameleon	462

U

<u>Uca pugilator</u>	349, 350
Ulua	763
<u>Uromastyx acanthinurus</u>	789
<u>Urophycis tenuis</u>	770

RTLA NO.V

<u>Varanus niloticus</u>	632, 635, 804
<u>Varanus salvator</u>	461, 719
Variegated cutworm	47, 48
<u>Venerupis staminea</u>	155
<u>Venus mercenaria</u>	421

W

Walleye	22, 93, 163, 164, 525, 612, 624-627, 638, 641-643, 690, 698, 699, 709, 730-732, 734-736, 739-742, 744, 745, 747, 749, 799
<u>Walterinnesia aegyptia</u>	775
Warmouth	401
Water moccasin	721
Water snake	120
Weakfish	608
Western diamondback rattler	428, 429
Western fence lizard	87
Western toad	206
White catfish	613
White croaker	62, 404, 405, 495, 549
White hake	770
White perch	600, 601
White sucker	7, 24, 177, 639, 645, 646
White ulua	763
White's tree frog	410
Whiting	521

XYZ

<u>Xenochrophis piscator</u>	120
<u>Xenopus laevis</u>	31, 32, 109, 238, 614
<u>Xiphophorus maculatus</u> x <u>helleri</u>	230
Yellow bullhead	290, 386, 387, 390, 397, 406, 468-471, 582, 584, 620, 621, 695, 696, 830, 839
Yellow perch	777
Yellowfin goby	58, 479, 480
Zebra caterpillar	182



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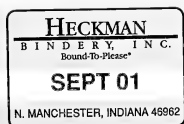
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